



Kimberley/Pilbara/Gascoyne Joint Development Assessment Panel Agenda

Meeting Date and Time: 29 March 2018; 11:00am
Meeting Number: KPGJDAP/13
Meeting Venue: Department of Planning, Lands and Heritage
140 William Street
Perth

Attendance

DAP Members *via teleconference*

Mr Eugene Koltasz (Presiding Member)
Mr Christopher Antill (Deputy Presiding Member)
Mr Luigi D'Alessandro (Specialist Member)

Officers in attendance *via teleconference*

Mr Chris Sayer (City of Karratha)
Mr Jerrom Hurley (City of Karratha)
Mr Ryan Hall (City of Karratha)

Minute Secretary

Ms Michelle Tan (Department of Planning, Lands and Heritage)

Applicants and Submitters *via teleconference*

Mr Mike Price (Woodside Energy Ltd)
Ms Suzannah Randle (Woodside Energy Ltd)
Ms Debbie McPhee (Woodside Energy Ltd)
Ms Dayna Burns (Woodside Energy Ltd)
Mr Rowe Cunningham (Rowe Group)

Members of the Public / Media

Nil

1. Declaration of Opening

The Presiding Member declares the meeting open and acknowledges the past and present traditional owners and custodians of the land on which the meeting is being held.

2. Apologies

Cr Peter Long (Local Government Member, City of Karratha)
Cr Grant Cucel (Local Government Member, City of Karratha)
Cr Everette Smeathers (Local Government Member, City of Karratha)



3. Members on Leave of Absence

Nil

4. Noting of Minutes

Note the Minutes of the Kimberley/Pilbara/Gascoyne JDAP meeting No. 12 held on 18 May 2017.

5. Declarations of Due Consideration

Any member who is not familiar with the substance of any report or other information provided for consideration at the DAP meeting must declare that fact before the meeting considers the matter.

6. Disclosure of Interests

Member/Officer	Report Item	Nature of Interest
Cr Grant Cucel	8.1	Direct Pecuniary Interest
Cr Cucel owns 2,750 Woodside shares.		

7. Deputations and Presentations

Nil

8. Form 1 – Responsible Authority Reports – DAP Applications

8.1	Property Location:	Lot 384, Lot 573 and Lot 566 MoF Road, Burrup
	Application Details:	Storage Facility/Depot/Laydown Area
	Applicant:	Woodside Energy Ltd
	Owner:	Western Australian Land Authority (Lot 384 and Lot 573) and Department of Planning, Lands & Heritage (Lot 566)
	Responsible Authority:	City of Karratha
	DAP File No:	DAP/18/01385

9. Form 2 – Responsible Authority Reports – Amending or cancelling DAP development approval

Nil

10. Appeals to the State Administrative Tribunal

Nil

11. General Business / Meeting Closure

In accordance with Section 7.3 of the DAP Standing Orders 2017 only the Presiding Member may publicly comment on the operations or determinations of a DAP and other DAP members should not be approached to make comment.



Form 1 – Responsible Authority Report

(Regulation 12)

Property Location:	Lot 384, Lot 573 and Lot 566 MoF Road, Burrup
Development Description:	Storage Facility/Depot/Laydown Area
DAP Name:	Kimberley/Pilbara/Gascoyne JDAP
Applicant:	Woodside Energy Ltd
Owner:	Western Australian Land Authority (Lot 384 and Lot 573) and Department of Planning, Lands & Heritage (Lot 566)
Value of Development:	\$10.56 million
LG Reference:	DA17149
Responsible Authority:	City of Karratha
Authorising Officer:	Ryan Hall – Director Development Services
DAP File No:	DAP/18/01385
Report Due Date:	21 March 2018
Application Received Date:	12 March 2018
Application Process Days:	9 Days
Attachment(s):	<ol style="list-style-type: none">1. Location and Site Context Plans2. Development Plans and Elevations3. Copies of responses received from agencies and other stakeholders4. 'Road Upgrade Deed'5. Concept Plan of Potential Intersection Treatments in MoF Road

Officer Recommendation:

That the Kimberley/Pilbara/Gascoyne JDAP resolves to:

1. **Approve** DAP Application reference DAP/18/01385 and the following accompanying plans:
Context Plans;
Drawing No: 401012-02391-21-MP-DLP-0001-000 Rev3;
Drawing No: 401012-02391-21-MP-DLP-0002-000 Rev3;
Drawing No: 401012-02391-21-MP-DGA-0001-000 Rev3;
Drawing No: 401012-02391-21-MP-DAG-0001-000 Rev1;
Drawing No: 401012-02391-21-MP-DRD-0001-000 Rev2;
Drawing No: 401012-02391-21-MP-DRD-0002-000 Rev2;
Drawing No: 401012-02391-21-MP-DAG-0002-000 Rev1;
in accordance with Clause 68 of the *Planning and Development (Local Planning Schemes) Regulations 2015* and the provisions of the Shire of Roebourne Town Planning Scheme No. 8, subject to the following conditions:

Conditions

- 1) This decision constitutes planning approval only and is valid for a period of two years from the date of approval. If the subject development is not substantially commenced within the two year period, the approval shall lapse and be of no further effect.

- 2) Stormwater management is undertaken in accordance with approved plans at all times the development is operational.
- 3) Prior to the development becoming operational, the components of Annexure 'A' – Recommendations and Works of the 'Road Upgrade Deed' signed by LandCorp and Woodside on 8 March 2018 are to be completed.
- 4) Prior to the installation of any traffic management devices or works within the MoF Road reserve, the proponent is to submit a detailed Traffic Management Plan to be endorsed by the City of Karratha.
- 5) Prior to the truck loading terminal becoming operational, all elements of the endorsed Traffic Management Plan required under Condition 4, to be installed, at the proponents cost.

Advice Notes

- a) Should the proponent at any time seek to use restricted vehicles above a 'RAV' 6 rating on MoF Road, the proponent will be required to seek approval from Main Roads WA to a higher rating. If Main Roads is willing to approve such an application, then upgrades to MoF Road are likely to be required. Any future upgrade would be at the cost of the proponent and any works in the MoF Road reserve will require relevant approvals from the City.
- b) Any Heavy Vehicle Operator/s will be required to carry a CAO7 Local Government approval when using MoF Road. The City's CAO7 approvals for MoF Road will be time limited to allow for performance under the approval to be reviewed at the point of requested renewal or revision. When assessing applications for CAO7 Local Government approval for MoF Road, the City will consider factors including: number of vehicle trips; size and weight of vehicles; and current condition and ability of MoF Road to accommodate proposed usage.
- c) There may be some components within the approved plans that require a Building Permit under the National Construction Code. It is recommended the proponent consult with the City of Karratha's Building Coordinator in regard to this matter.
- d) The proponent is required to undertake the development in accordance with the *Dangerous Goods Safety Act 2004* and relevant associated regulations.
- e) Where an approval has lapsed, no development must be carried out without the further approval of the local government having first being sought and obtained.
- f) If an applicant or owner is aggrieved by this decision, then there is a right of review by the State Administrative Tribunal in accordance with the *Planning and Development Act 2005*. An application must be made within 28 days of the determination.

Details: outline of development application

Insert Zoning	MRS:	N/A
	TPS:	Strategic Industry
Insert Use Class:		Storage Facility/Depot/Laydown Area – 'D' Use
Insert Strategy Policy:		N/A
Insert Development Scheme:		Town Planning Scheme No.8
Insert Lot Size:		Lot 384 = 11.789 Ha Lot 573 = 6.957 Ha Lot 566 = 0.811 Ha
Insert Existing Land Use:		Lot 384 - cleared area, no existing structures or infrastructure Lot 573 – contains a sealed haul road Lot 566 – contains a sealed haul road over pipeline infrastructure, and gatehouse

Description of the Proposal

The application is for the development of a LNG truck loading terminal where LNG will be loaded into trucks for distribution within the Pilbara. This proposal fits within the use class 'Storage Facility/Depot/Laydown Area' as shown in the zoning table of the City's Town Planning Scheme No.8 (the Scheme) and as defined under Appendix 1 of the Scheme. The proposed development includes works across three lots; being Lot 384, Lot 573 and Lot 566 MoF Road, Burrup. All three (3) lots are zoned Strategic Industry under the Scheme.

The applicant's initial intention is to only use road trains up to 'RAV 6' classification (Maximum 36m), commonly being double trailer road trains with dual wheel drives. MoF Road is already rated to carry 'RAV 6' vehicles. The application notes that the proposed development is designed to accommodate triple road trains but acknowledges that Main Roads approval would need to be granted to reclassify MoF Road, and that MoF Road would likely need to be upgraded to achieve that reclassification.

Lot 384: is proposed to contain the LNG truck loading terminal. Initially it is proposed to construct one (1) 'skid' to accommodate the loading of a single trailer of a truck at a time. However, approval is also sought for two additional 'skids' to allow for up to three trailers to be filled at a time. This would ultimately enable the loading of each trailer of a triple road train at the same time. Associated drainage works, pavement seal and fuel loading infrastructure are also proposed within Lot 384.

Lot 573: is proposed to contain works associated with upgrading the existing sealed 'haul road' (not a gazetted road) and the construction of a weigh bridge.

Lot 566: is proposed to contain works associated with upgrading the existing sealed 'haul road' (not a gazetted road), the removal of an existing gatehouse and the installation of traffic safety devices including, traffic signage, line marking, concrete barriers and guideposts required to protect a pipeline corridor that passes under the 'haul road' on Lot 566 crosses.

Some intersection treatments are required within the MoF Road reserve to accommodate the proposed development (see Attachment 5). MoF Road is a gazetted road managed by the City.

Background:

Previously Development Approval PA1837 was issued in 2008 for a LNG Processing Plant and this approval included Lot 384 and surrounding land parcels.

Land Tenure Details

- Lot 384 is owned in freehold title by LandCorp.
- Lot 573 is owned in freehold title by LandCorp.
- Woodside has a lease with LandCorp over both Lots 384 and 573.
- Lot 566 is a Crown lot under the management of the Department of Planning, Land and Heritage. LandCorp has a lease over Lot 566. Burrup Fertilisers Pty Ltd has a sublease over a part of Lot 566. This sublease is primarily for a pipeline that passes through the lot and under the existing 'haul road'. This pipeline conveys product from the Burrup/Yara Fertiliser Plant (located approximately 2.4km to the south east of the subject site) to the Pilbara Port Authority port facilities (located approximately 800m to the west of the subject site).
- Woodside has an easement over Lot 566 allowing vehicle access across this parcel.

Site and Surrounds

Lot 384 is within the greater Pluto LNG Plant area located on the Burrup Peninsula. Lot 384 is proposed to contain the LNG truck loading terminal component of the proposed development. Only the north east corner of Lot 384 is proposed to be used for the terminal. The area has previously been cleared and used as a laydown area for the Pluto LNG Plant. Immediately adjacent to the proposed site to the west is an internal access road and beyond are elements of the LNG Plant, being pipe racks and large volume storage tanks. To the south of the proposed terminal, the landscape is undisturbed, natural and typical of Burrup Peninsula rock formations. Pipe racks associated with the LNG Plant and an internal access road lie to the immediate north of the proposed site. Beyond is a large undisturbed natural area and a quarry.

Lot 573 is immediately south east of Lot 384 and contains an existing haul road. Lot 573 is approximately 1.16km in length running in a north south direction. The lot is narrow, with a width of only 57 - 61m. It is proposed to undertake road upgrade works to the existing haul road and construct a weighbridge within Lot 573. Additional infrastructure associated with the Pluto LNG Plant is located to the south east of Lot 573. At its southern extremity, Lot 573 connects with Lot 566. The existing haul road within Lot 573 continues through Lot 566 and connects with MoF Road.

Lot 566 is approximately 110m long with a maximum width of 60.7m. In addition to the existing haul road, Lot 566 currently contains an existing gatehouse and a section of a pipeline that carries product from Yara's Plant to the port. The pipeline is located under the haul road and runs in an east west direction.

Lot 566 connects to MoF Road, forming a 'Y' shaped intersection. MoF Road currently provides connection to the haul road and access into the Pilbara Ports Authority's port facilities.

Legislation and Policy:

Legislation

- *Planning and Development Act, 2005*
- *Planning and Development (Local Planning Schemes) Regulations, 2015, specifically Schedule 2 [Regulations]*
- *Shire of Roebourne Town Planning Scheme No.8 (TPS8)*

State Government Policies

State Planning Policy 3.4 – Natural Hazards and Disasters

State Planning Policy 3.7 – Planning in Bushfire Prone Areas

State Planning Policy 2.6 – State Coastal Planning

Local Policies

Local Planning Policy DP5 – Industrial Zones and Industrial Development Requirements

Consultation:

Public Consultation

The proposal for a 'Storage Facility/Depot/Laydown Area' does not require public advertising under the Scheme. Public advertising was not considered necessary in this case because the proposed development is contained within the much larger existing Pluto LNG Plant.

Consultation with other Agencies or Consultants

The following agencies and organisations were consulted:

- LandCorp
- Department of Jobs, Tourism, Science and Innovation (DJTSI)
- Pilbara Ports Authority (PPA)
- Main Roads WA (MRWA)
- Department of Mines, Industry, Regulation and Safety (DMIRS)
- Department of Planning, Lands and Heritage (DPLH)
- Department of Fire and Emergency Services (DFES)
- Department of Water and Environmental Regulation (DWER)
- Yara Pilbara

Issues raised will be discussed throughout this report where relevant. The submissions from each agency/organisation are included under Attachment 3. No objections to the proposed development were received. The applicant has been working with submitters to address points made in submissions, and assisting the City in working through its assessment and the recommended conditions contained herein.

Planning Assessment:

Local Planning Scheme

The relevant Clauses of the Scheme relating to the site and the proposed development are outlined below.

Clause 5.4 provides for 'Burrup Peninsula Objectives', with the relevant objectives being:

- (a) *Retain an appropriate balance between the Burrup's recreational, industrial, environmental and heritage assets.*
- (c) *Adopt the principles and policies of the Burrup Peninsula Land Use and Management Strategy (BPLUMS).*

Under the BPLUMS, all three land parcels subject of this proposal are located within 'Area C' of the Burrup Peninsula. This area is proposed for land based industrial activity and port facilities. The proposal is considered to meet the principles and policies of the BPLUMS. As the proposal is complementary to previously approved Pluto LNG Plant and is located on a previously cleared area of land, it is considered to meet Clause 5.4 (a) of the Scheme.

Industry - Clause 6.7.2 – General Provisions states:

In considering development applications within the Strategic Industry zone...the City shall have regard for the:

- a) *compatibility of uses;*
- b) *potential impact of the proposal on the efficient and effective operations of the existing and planned industry, infrastructure...; and*
- c) *risks, hazards, health and amenity associated with the proposed use being located in proximity to existing and planned industry, infrastructure or public purpose or any other use.*

Upon review of the submitted information supporting the application, it has been determined that the proposal is compatible with existing uses in the Strategic Industry zone at the Burrup and will not impede the ability of this strategic industrial area to operate efficiently and effectively for the purpose of providing for State significant industry.

Clause 6.7.3 relates directly to the Strategic Industry zone and requires that a proposal:

- a) *optimises the effectiveness of the zone as a strategic industrial area and utilises major infrastructure, creates symbiosis with other industries or includes resource processing industry;*
- b) *is significant to the regional and/or state economies; or*
- c) *provides goods and services which directly support or complement industries described in a) and b) of this subclause; and*
- d) *minimises or offsets impacts on local infrastructure, economic and community development.*

It is considered that the proposal optimises effective use of land within this strategic industrial area by adding value to the already significant contribution of this industry to the regional and State economy.

Clause 6.7.4 of the Scheme states that development which may impede the operation of strategic industry is not permitted. The proposal is complementary to the existing strategic industry on the Burrup.

Clause 6.7.5 of the Scheme requires the City to consult with relevant agencies when assessing Development Applications in the Strategic Industry zone. As outlined above, the City has undertaken this consultation.

City of Karratha Draft Local Planning Strategy (Draft LPS)

The proposal meets the direction for development over this land which is for the continued use of the land for strategic industry.

State Planning Policies

2.6 – State Coastal Planning

The nearest point of the footprint of the development is approximately 500m from the Mean High Water Mark. Storm surge modelling for the nearby townsite of Dampier shows that a modelled 1 in 500 year ARI storm surge event would affect land at just over 6m AHD. The proposed loading terminal is at 30m AHD with a stable rock foundation. Based on this information, the proposed development is not considered to be at risk from coastal processes.

3.4 – Natural Hazards and Disasters

The Burrup is located in a cyclone prone area. Any elements of the proposed development, where required, are to be constructed to wind load standards required under the National Construction Code. The need for a building permit for any of the proposed works is currently being considered by the City. The proposal includes adequate detail to manage stormwater flow at the site, which takes into consideration surrounding land areas. A condition of approval is recommended to ensure stormwater management is undertaken in accordance with approved plans at all times the development is operational. As requested by the DMIRS, it is recommended that the proponent be required to undertake the development in accordance with the *Dangerous Goods Safety Act 2004* and relevant associated regulations. An advice note is recommended to this effect.

3.7 – Planning in Bushfire Prone Areas

DFES has advised that the site is mapped as being located in a bushfire prone area. Part 10A – Bushfire Risk Management of the *Planning and Development (Local Planning Schemes) Regulations 2015* Section 78B outlines development to which Part 10A does not apply. Section 78B indicates that Part 10A does not apply to this proposal. It is therefore recommended that neither a Bushfire Management Plan or a BAL assessment be required as part of this application.

Local Planning Policies (LPP)

DP5 – Industrial Zones and Industrial Development Requirements

The City's LPP DP5 includes industrial development in the Strategic Industry zone, however it has a focus on industrial development at a smaller scale than that found on the Burrup and is designed to apply to general industrial estate situations. The policy recommends preparation of Construction Environmental Management Plans and Operational Environmental Management Plans. The proponent has stated:

In accordance with existing Environmental Protection Act 1986 (WA) Part IV and Part V approvals for Pluto LNG we are required to develop a suite of Environmental Management Plans that are included in a Construction Environmental Management Plan (CEMP) during construction and then subsequently consolidated in an Operation Environmental Management Plan (OEMP) during operations. We have confirmed with DWER that the Pluto LNG Truck Loading Facility can be constructed and operated under these existing environmental approvals.

The proponent has forwarded a copy of the 'Pluto Domestic Fuel Supply – Construction Environmental Management Plan' document to the City. The document covers the following elements:

- Indigenous Cultural Heritage
- Air Quality and Dust
- Erosion and Sediment Control

- Groundwater and Surface Water
- Noise
- Onshore Spill Response
- Terrestrial Fauna
- Traffic
- Waste
- Weeds
- Terrestrial Vegetation and Flora

Considering the content of the CEMP and that the proponent is bound to the commitments of the CEMP through environmental legislation, the City is satisfied the proposal meets the requirements for a CEMP and OEMP under LPP DP5.

The policy considers the need for traffic management. This is an element of the proposal that is addressed in the 'Officer Comments' section below.

The proposal is considered to meet the relevant objectives of DP5.

Officer Comments

The proposal generally meets objectives and provisions of the applicable legislation and policy framework that relates to this site and land use. However, there are some aspects of the proposal that are considered to require conditions of approval to ensure an acceptable development at the site.

Traffic Management

The size and potential volume of heavy vehicles could pose a risk to existing infrastructure and other road users. It is important that appropriate traffic management is achieved in operating this development, both within the site (Lots 384, 573 and 566) and on the adjoining MoF Road. This was the focus of comments received.

Traffic management within the subject site should achieve:

- safety to drivers of the trucks entering and exiting the proposed LNG truck loading terminal site and to any Woodside staff utilising the 'haul road';
- protection for the safe operation of the proposed facility itself and to surrounding infrastructure of the existing Pluto LNG Plant;
- protection to existing infrastructure located within Lot 566, particularly the pipeline for which Yara Fertilisers has a sub-lease over a portion of Lot 566 and which carries product from the Yara Fertiliser plant to the nearby port;
- an acceptable level of safety and traffic flow for drivers and other users of MoF Road.

To achieve the above, LandCorp (as the owner of Lots 573 and primary interest holder of 566) and Woodside have entered into a 'Road Upgrade Deed'. The deed provides the following commitments by Woodside under Annexure A:

- Reduce speed along the 'haul road' to 30km/hr as it traverses through Lots 384, 573 and 566;
- Install an edge of carriageway line along the entire length of the 'haul road';
- Delineate the weighbridge with lighting;
- Implement a trafficable carriageway width of 8m;
- Remove the gatehouse and associated transportable structure from Lot 566;
- Install barriers within Lot 566; and

- Seek the support of the City of Karratha, Pilbara Ports Authority and any other relevant Government entities to enable the installation of signage and line marking at the intersection of MoF Road and the 'haul road'.

To ensure the elements of the deed relating to traffic management are implemented, it is recommended a condition of approval is imposed that binds the proponent to undertake the commitments of the Deed and maintain these elements at all times while the proposed development is operational.

As is noted above, the proponent is proposing to undertake traffic management within the MoF Road reserve. As this road is managed by the City and is a public road, the City is seeking to ensure that the potential increase in heavy traffic this proposal will generate overtime is adequately managed to maintain acceptable traffic safety and avoid inappropriate use of this road. Many of the proposed traffic management elements to be undertaken require approval by Main Roads. The City is generally supportive of traffic management proposed within MoF Road under the 'Road Upgrade Deed'.

The applicant has submitted a concept plan for traffic management within the MoF Road reserve. The concept plan is generally acceptable to the City. However, elements of the plan are required to be provided in greater detail and checked against relevant Aus Roads Standards and Main Roads requirements, with further consultation with the Pilbara Ports Authority and any other relevant Government entity before the City would endorse any plan for implementation on the ground.

Two conditions of approval are recommended to ensure appropriate traffic management in MoF Road. The first condition would require that prior to the installation of any traffic management devices or works within MoF Road, the proponent is to submit a detailed Traffic Management Plan to be endorsed by the City of Karratha. The second condition would require all elements of the endorsed Traffic Management Plan to be installed, at the proponents cost, prior to the truck loading terminal becoming operational, allowing construction to commence without delay.

MoF Road is currently only of a standard to accommodate up to 'RAV 6' restricted vehicles and the applicant has indicated that there is the possibility that they may seek larger sized vehicle access to the facility in the future. An advice note is therefore recommended to advise the applicant that the proponent will be required to seek Main Roads approval to a higher 'RAV' rating for MoF Road, that any future upgrade to achieve this rating would be at the cost of the proponent, and that any works in the MoF Road reserve will require City approval.

Options/Alternatives:

The JDAP may consider an alternative to the City's recommendation below.

Council Recommendation:

It is recommended the Kimberley/Pilbara/Gascoyne JDAP approve the proposed development with conditions and advice notes as outlined above.

Conclusion:

The proposal to develop a Storage Facility/Depot/Laydown Area land use in accordance with the City's Scheme is a suitable use within Lots 384, 573 and 566.

The land is capable of accommodating the proposed development. Traffic management and protection of existing infrastructure within the vicinity has been addressed as part of the application review process. It is considered that the submitted plans, along with recommended conditions will ensure that the relevant objectives of the Scheme and relevant policy provisions will be upheld. Recommended conditions have been developed to ensure development standards are met, whilst enabling the applicant to meet construction timelines. The proposal is recommended for approval with conditions and advice notes.

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Context Plan

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William Clements 20 March 2018

Lot 384, Lot 566 & Lot 573 Mof Road Burrup

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PLANNING DESIGN DELIVERY

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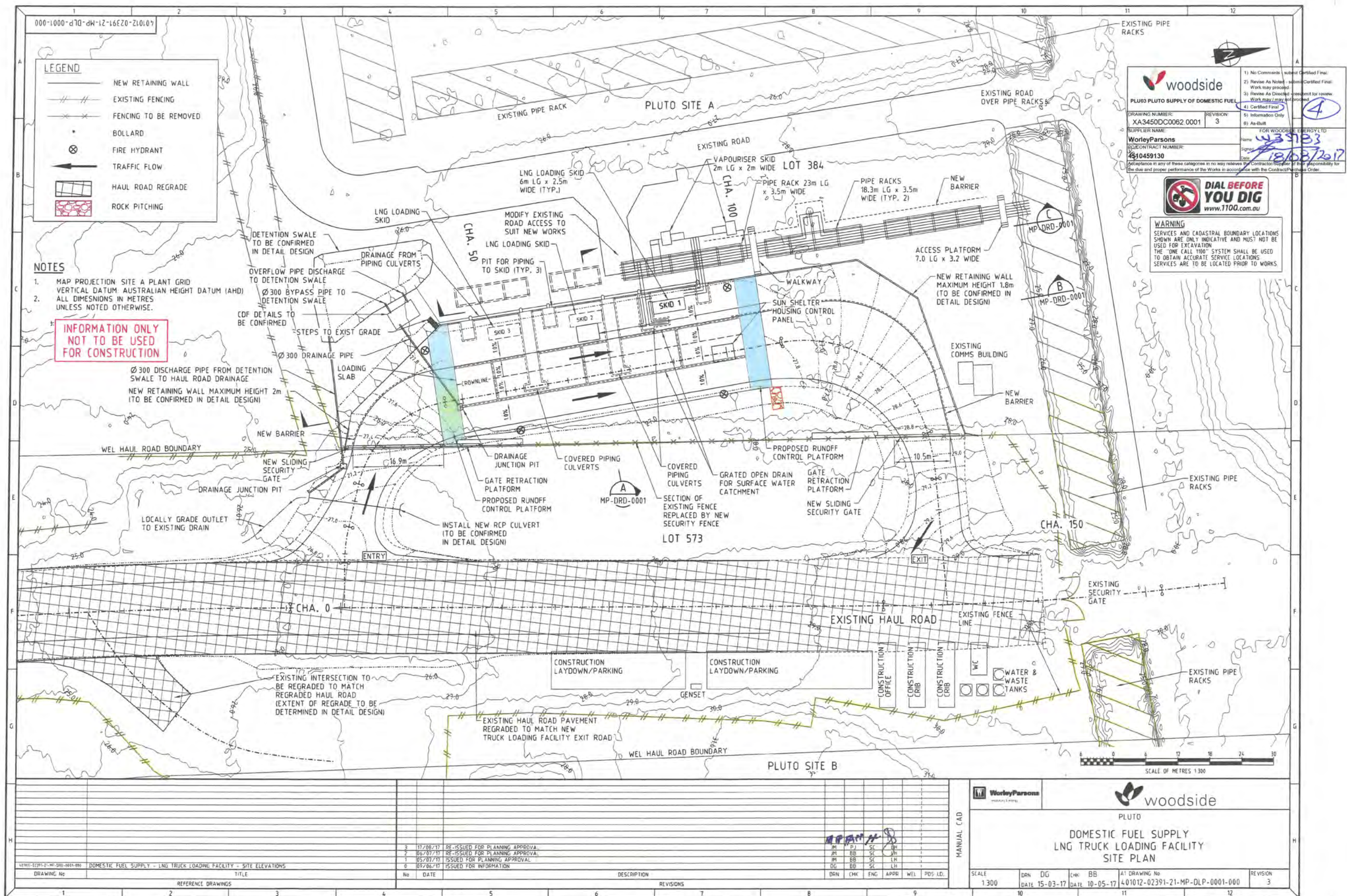
LEGEND	
---	SUBJECT LOTS
---	DEVELOPMENT AREA
7	EXISTING LOT NUMBERS
---	EXISTING BOUNDARIES

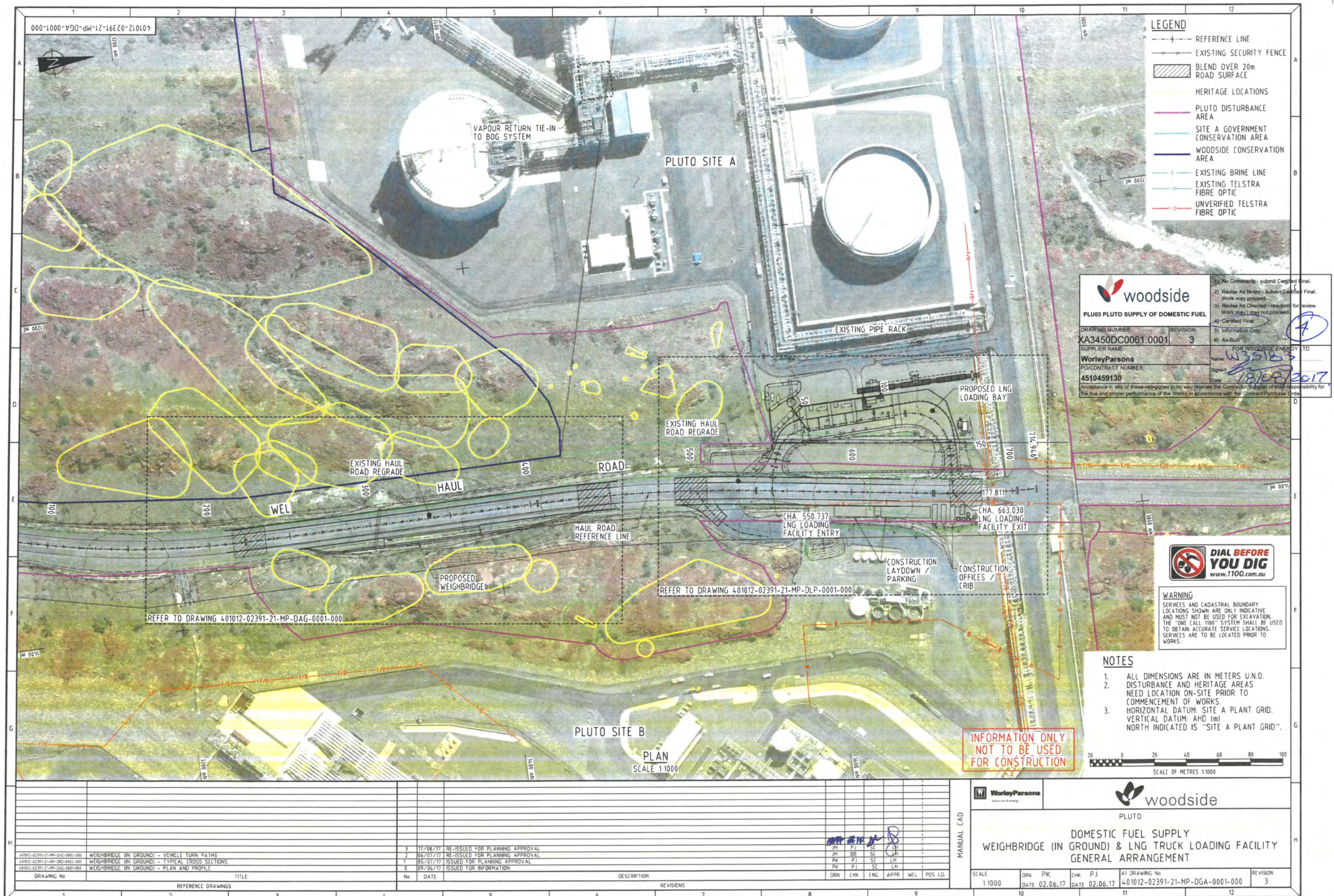
Context Plan

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William Clements 20 March 2018

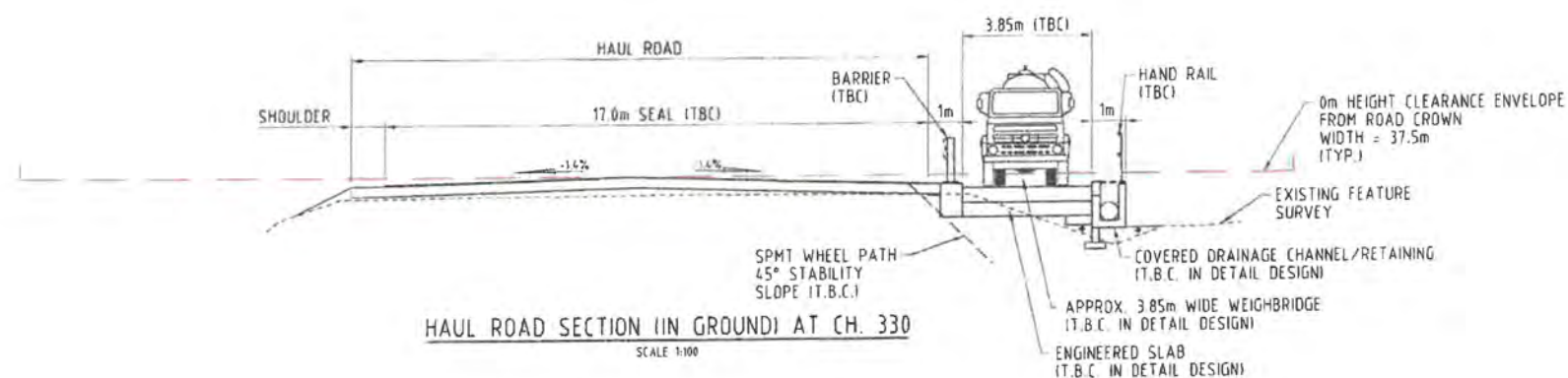
Lot 384, Lot 566 & Lot 573 Mof Road Burrup







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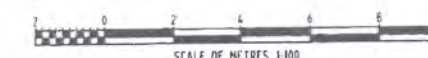
		1) No Comments - submit Certified Final. 2) Revise As Noted - submit Certified Final. Work may proceed. 3) Revise As Directed - resubmit for review. Work may / may not proceed. 4) Certified Final 5) Information Only 6) As-Built	
PLU03 PLUTO SUPPLY OF DOMESTIC FUEL		FOR WOODSIDE ENERGY LTD	
DRAWING NUMBER: XA3450DC0065.0001	REVISION: 2	Name: W35183	
SUPPLIER NAME: WorleyParsons		Signed: [Signature]	
PO/CONTRACT NUMBER: 4510459130		Date: 18/08/2017	
Acceptance in any of these categories in no way relieves the Contractor/Supplier of their responsibility for the due and proper performance of the Works in accordance with the Contract/Purchase Order.			

LEGEND

0m HEIGHT CLEARANCE ENVELOPE FROM ROAD CROWN WIDTH = 37.5m

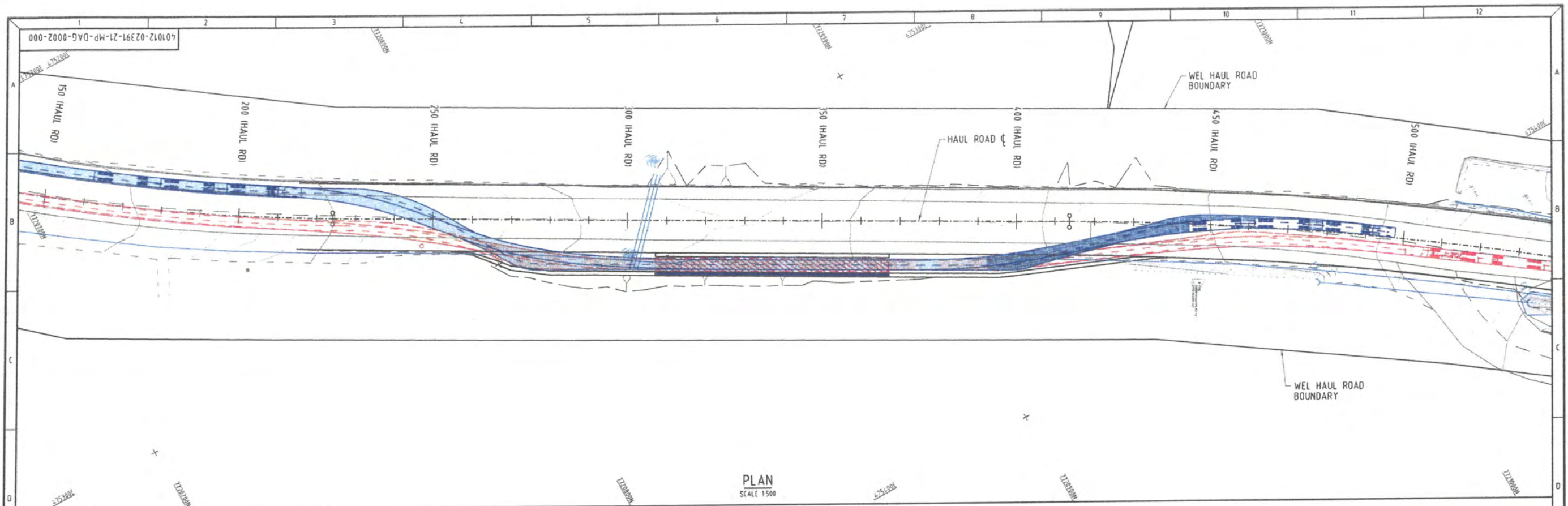
NOTES

- ALL DIMENSIONS ARE IN METRES U.N.O.
- BATTER SLOPES 4:1V (TBC)
- ALL ABOVE GROUND STRUCTURES HAVE BEEN DESIGNED TO BE REMOVABLE. DIMENSIONS INDICATED TO BE CONFIRMED IN DETAILED DESIGN



DRAWING No	TITLE	No	DATE	DESCRIPTION	REVISIONS	DRN	CHK	ENG	APPR	WEL	POS	LD
1	WEIGHBRIDGE (IN GROUND) - GENERAL ARRANGEMENT	1	06/07/17	ISSUED FOR PLANNING APPROVAL								
2	WEIGHBRIDGE (IN GROUND) - VEHICLE TURN BAYS	1	06/07/17	ISSUED FOR PLANNING APPROVAL								
3	WEIGHBRIDGE (IN GROUND) - PLAN AND PROFILE	1	06/07/17	ISSUED FOR INFORMATION								

PLUTO			
DOMESTIC FUEL SUPPLY WEIGHBRIDGE (IN GROUND) TYPICAL CROSS SECTIONS			
SCALE 1:100	DWN: PK DATE: 31-05-17	CHK: PJ DATE: 02-06-17	AT DRAWING No: 401012-02391-21-MP-DRD-0002-000 REVISION: 2



WARNING
SERVICES AND CADASTRAL BOUNDARY LOCATIONS SHOWN ARE ONLY INDICATIVE AND MUST NOT BE USED FOR EXCAVATION. THE "ONE CALL 1100" SYSTEM SHALL BE USED TO OBTAIN ACCURATE SERVICE LOCATIONS. SERVICES ARE TO BE LOCATED PRIOR TO WORKS.


 PLU03 PLUTO SUPPLY OF DOMESTIC FUEL		1) No Comments - submit Certified Final.
		2) Revise As Noted - submit Certified Final. Work may proceed.
DRAWING NUMBER: XA3450DC0060.0001		REVISION: 1
SUPPLIER NAME: WorleyParsons		FOR WOODSIDE ENERGY LTD
PO/CONTRACT NUMBER: 4510459130		Name: <i>[Signature]</i>
Acceptance in any of these categories in no way relieves the Contractor/Supplier of their responsibility for the due and proper performance of the Works in accordance with the Contract/Purchase Order.		Signed: <i>[Signature]</i>
		Date: <i>21/7/2017</i>

NOTES

1. ALL DIMENSIONS ARE IN METRES U.N.O.
2. BATTER SLOPES 4H IV (TBC)
3. MAP PROJECTION: MGA94 ZONE 50
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM (AHD)
VEHICLE PATH ENTRY/EXIT SPEED:
- NOMINALLY 5 - 15km/h.
4. VERTICAL CLEARANCE FOR SPMT MODULES TO BE CONFIRMED IN DETAILED DESIGN.



INFORMATION ONLY
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Our ref: J0817/201701
Enquiries: Steve.Dawson@jtsi.wa.gov.au -
Phone: 9222 0466

Mr Chris Sayer
Principal Statutory Planner
City of Karratha
PO Box 219
KARRATHA WA 6714

Dear Chris

**PROPOSED LIQUIFIED NAURAL GAS ('LNG') TRUCK LOADING TERMINAL
AND WEIGHBRIDGE – LOTS 384 AND 573 MOF ROAD BURRUP**

I refer to your correspondence dated 29 November inviting the Department to comment on the above proposal.

As the lead agency for the Burrup Strategic Industrial Area, the Department has worked closely with Landcorp as the freehold title owner of Lots 384 and 573 to develop a coordinated response to this proposal.

Having had the opportunity to consider the Transcore report commissioned by Landcorp, the Department will support the LNG Truck Loading Terminal and Weighbridge Development Application subject to following conditions being imposed:

1. Woodside being required to implement the recommendations outlined within its Road Safety Audit and Roadside Hazard Assessment Report by Edges Transport Solutions and LandCorp's Peer Review Report by Transcore;
2. In particular, Woodside being required to erect crash barriers within Lot 366 across the full width of the East West Service Corridor ("EWSC") to the satisfaction of Yara Pilbara Fertilisers, Department of Jobs, Tourism, Science and Innovation and LandCorp to further protect the EWSC infrastructure; and
3. Woodside removing its current gatehouse infrastructure to within its Pluto plant site lease area.

Please do not hesitate to contact Steve Dawson, A/ Project Manager on 9222 0466 should you have any enquiries.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Christine Ginbey', with a large, stylized loop at the end.

Christine Ginbey
Executive Director
INFRASTRUCTURE AND LAND PLANNING

13th December 2017



LANDCORP

Our Ref: KARRB – A1552589
Enquiries: Tim Carr – 08 9482 7452
Date: 13 December 2017

Chris Sayer
Principal Statutory Planner
City of Karratha
Lot 1083 Welcome Road
PO Box 219
KARRATHA WA 6714

Dear Chris,

City of Karratha Referral – Woodside Draft Development Application for a Liquefied Natural Gas Truck Loading Terminal and Weighbridge.

I refer to your correspondence dated 29 November 2017 seeking comments on Woodside's draft Development Application for a Liquefied Natural Gas (LNG) Truck Loading Terminal and Weighbridge proposed to be located within Woodside's Pluto LNG Plant lease areas on Lots 384 (subject to Pluto LNG Plant lease) and 573 (subject to Pluto Haul Road lease).

LandCorp owns the freehold title of both Lots 384 and 573 and has entered into the above long term leases with Woodside for the construction and operation of its Pluto LNG Plant. We note that as landowner of Lots 384 and 573, LandCorp has not as yet signed the Development Application for Woodside's proposed LNG Truck Loading Terminal and Weighbridge.

We note also that the proposal will affect Lot 566 (Crown land) which is part of the East West Service Corridor (EWSC). LandCorp has a long term lease from the Crown over Lot 566 to develop and manage the EWSC. LandCorp subleases a portion of the corridor to Yara Fertilisers, who has constructed an above ground ammonia pipeline within the EWSC. The pipeline traverses underneath the haul road in a reinforced concrete culvert. The EWSC is designed to accommodate multiple product pipelines and conveyors and LandCorp expects further development in the ESWC in the future (refer Attachment 1 for a map of the lots, lease areas and associated infrastructure).

Lots 566 and 573 are also a private haul road, designed principally for the transfer of heavy haul modules from the Pilbara Port for both the Pluto and North West Shelf projects. Any construction within these lots must not impede further modules which will overhang the road width (i.e. be of low height or removable). Additionally, it is LandCorp's opinion that the road is not currently constructed or designed for the type truck movements now being proposed given the presence of the EWSC.

The proposal will also affect the local road network and movements, including into and out of the Pilbara Port Authority's operations.

LandCorp has been in discussion with Woodside on this proposal and has raised concerns around the interaction of vehicles associated with the project traversing Lot 566.

LandCorp's primary concern is the risk of these vehicles impacting Yara Fertiliser's ammonia pipeline or future pipelines in the event of an accident. The potential safety and economic risks from such an impact on the Burrup are likely to be significant.

LandCorp appointed Transcore as an independent traffic consultant to peer review Woodside's traffic management report (undertaken by Edge Transport Solutions). As part of Transcore's appointment, it consulted with the following stakeholders with an interest in the EWSC. These stakeholders were:

- Department of Jobs, Tourism, Science and Innovation;
- Department of Mines, Industry Regulation and Safety;
- Pilbara Ports Authority; and
- Yara Pilbara Fertilisers.

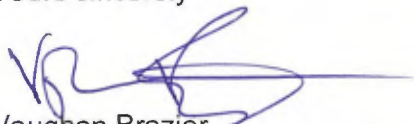
Each stakeholder's comments are summarised in the Transcore report (refer Attachment 2).

In summary, LandCorp is supportive of Woodside's LNG Truck Loading Terminal and Weighbridge Development Application subject to the following conditions being imposed:

1. Woodside being required to implement the recommendations outlined within its Road Safety Audit and Roadside Hazard Assessment Report by Edge Transport Solutions and LandCorp's Peer Review Report by Transcore;
2. In particular, Woodside being required to erect crash barriers within Lot 566 across the full width of the EWSC crossing to the satisfaction of Yara Pilbara Fertilisers, Department of Jobs, Tourism, Science and Innovation and LandCorp to further protect the EWSC infrastructure; and
3. Woodside removing its current gatehouse infrastructure to within its Pluto LNG Plant lease area.

If you require any further information in relation to this matter, please contact Tim Carr.

Yours sincerely



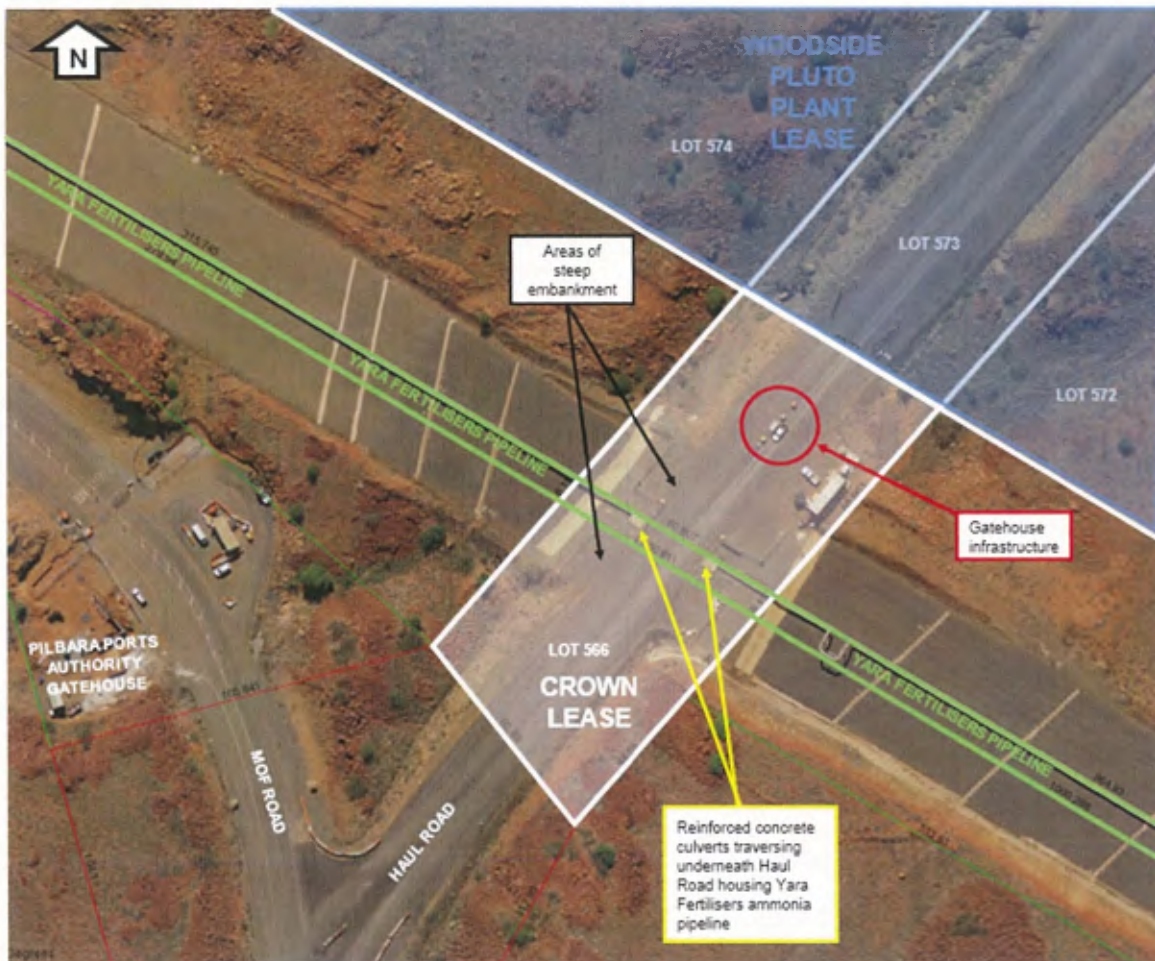
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MANAGER STRATEGIC INDUSTRIAL

Attachment 1: Aerial of Project Area

Attachment 2: Transcore Road Safety Audit Peer Review Report

Attachment 1: Aerial of Project Area





WEL Haul Road & Mof Road/WEL Haul Road Intersection - Road Safety Audit & Roadside Hazard Assessment

Peer Review Report

**PREPARED FOR:
LandCorp**

December 2017

Document history and status

Author	Revision	Approved by	Date approved	Revision type
Vladimir Baltic	r01	B Bordbar	7/12/2017	Final

File name: t17.314.vb.r01.docx

Author: Vladimir Baltic

Project manager: Behnam Bordbar

Client: LandCorp

Project: .

Document revision: r01

Project number: t17.314

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1.0 Introduction

Transcore has been commissioned by LandCorp to undertake a Peer Review of the *Existing Road: Road Safety Audit & Roadside Hazard Assessment Report for WEL Haul Road and Mof Road/WEL Haul Road Intersection (version No. 1.1)* (hereafter RSA) and the *Roadside Hazard Risk Assessment on WEL Haul Road at Ammonia Pipeline Crossing (version No. 1.3)* (hereafter RHRA) reports prepared by EDGE Transport Solutions in October 2017 and November 2017.

The aim of the RSA was to assess the risks associated with the transport task relating to the proposed new LNG truck loading terminal to be installed within Woodside's Pluto LNG site in the Burrup Strategic Industrial Area and make recommendations on any further upgrades required. The loading facility is served by the existing WEL Haul Road which forms part of the access/egress route. As part of the RSA scope a safety assessment of the existing WEL Haul Road, Mof Road/WEL Haul Road and WEL Haul Road/Service Road intersections was also undertaken. The RHRA was focused around the risk assessment of the WEL Haul Road ammonia pipeline crossing and the safety implications of the proposed LNG transport task on this facility.

LandCorp has engaged Transcore to undertake an independent peer review of the RSA to establish that the proposed road safety and risk assessment recommendations address potential safety issues and in particular with respect to the following critical issues:

- ✦ The risk of LNG trucking vehicles coming off the WEL Haul Road and crashing into Yara Pilbara Fertilisers ammonia pipeline; and,
- ✦ The risk of heavy vehicle traffic travelling in and out of the Haul Road off Mof Road given the Y-shaped intersection layout of Mof Road/WEL Haul Road intersection.

In addition to peer review, Transcore has also provided comments, as appropriate, on other road and intersection aspects which may not be directly related to the RSA scope of works.

As part of the peer review process Transcore was also requested to liaise and discuss the implications and perceived risks associated with the proposal with the following key stakeholders:

- ✦ Yara Pilbara Fertilisers;
- ✦ Pilbara Port Authority;
- ✦ Department of Jobs, Tourism, Science and Innovation; and,
- ✦ Department of Mines, Industry Regulations and Safety.

2.0 Road Safety Audit & Roadside Hazard Risk Assessment – Peer Review

2.1 Road Safety Audit Report - Review

The peer review of the *Existing Road: Road Safety Audit & Roadside Hazard Assessment Report (version 1.1)* prepared by EDGE Transport Solutions was undertaken by Transcore during November 2017. The following general comments are provided in relation to the scope and methodology of the RSA report:

- ✦ The RSA provides a clear overview of the project scope.
- ✦ The RSA provides detailed description of the WEL Haul Road and Mof Road/Haul Road intersection which is the focus of the RSA assessment;
- ✦ Considering limited available traffic data information for the relevant roads the provided level of information is deemed adequate but additional information could have been provided to better inform the RSA; and,
- ✦ The assessment methodology and proposed traffic-related risk mitigating measures recommended and described in the RSA are generally considered to be sound.

Although to the RSA and risk assessment methodology and recommendations are generally sound, Transcore is of the view that several aspects of the RSA could have been expanded on or additional information included in the audit report. Transcore's comments are outlined in the following paragraphs:

Traffic Volumes on WEL Haul Road and Mof Road

It is not unusual that in remote areas limited traffic information is available and as such the auditor is often compelled to make estimations and rely on local knowledge. However, in this particular case existing and post-development traffic volumes including vehicle classes for respective roads are considered to be important factors in establishing the adequacy of the existing roads and intersections under consideration and to further confirm the requirement for any upgrades. Accordingly, it is recommended that traffic volumes and vehicle classes on WEL Haul Road and through the intersection of Mof Road/WEL Haul Road are established through appropriate traffic count surveys.

WEL Haul Road – horizontal delineation

The RSA provides a recommendation to install edge of carriageway lines and roadside marker guideposts along certain sections of the WEL Haul Road with a centre line over the hill crest. Considering that ultimately almost 100 additional heavy vehicles would be using this road 24 hour a day and in adverse weather conditions it is recommended that the installation of edge of carriageway line, centre line and raised pavement markers (i.e. cat's eyes) along entire length of WEL Haul Road be undertaken. Also, frangible roadside marker guideposts should be installed along all embankments, curves and through the ammonia pipeline crossing area. These guide

posts would need to be easily removable to allow for high'n'wide loads such as over-dimensioned industrial modules to be transported along this route.

LNG Weighbridge

The RSA refers to the installation of a weighbridge associated with the operation of LNG truck loading facility. It is unclear how will it be accessed and operated and if it will be equipped with appropriate lighting for night time operation. It is therefore recommended that the weighbridge is clearly delineated, its access and egress routes assessed and appropriate lighting is provided to improve safety during night time or times of poor visibility.

WEL Haul Road speed limit reduction

The RSA suggests that existing speed limit of 40km/h should be reduced to 30km/h (Section 3.2.2). The 30km/h speed maybe too low and therefore it may not be adhered to and therefore resulting in speeding beyond the existing 40km/h. As it would be difficult to enforce the 30km/h speed limit in this remote area it is therefore recommended that the 30km/h speed limit should only apply through the ammonia pipeline crossing zone.

WEL Haul Road carriageway standard

The RSA suggests that an 8.0m wide trafficable carriageway width for WEL Haul Road should be implemented to achieve a 3.0m wide clear zone in accordance with the Austroads Guidelines through application of edge line markings (Section 3.2.1). Roads within industrial zones are typically designed to have a 10.0m wide trafficable carriageway. Considering the future traffic volume, the percentage of heavy vehicles and classes of heavy vehicles on WEL Haul Road it is recommended that a 10.0m wide trafficable carriageway width be considered for WEL Haul Road. Given the road width of 15.7m through the ammonia pipeline zone a 10.0m carriageway width with 2.85m clear zone should be formed at this location with appropriate signage to advise caution while traversing over the pipeline.

Furthermore, the condition of WEL Haul Road pavement has not been considered in the RSA with respect to the impact of additional heavy vehicle traffic and axle loading. It is recommended that an assessment of WEL Haul Road pavement condition is carried out to ensure its suitability to accommodate the additional heavy vehicle traffic and axle loading.

The heavy rains, which are regularly experienced in the Pilbara during cyclone season, can result in ponding and flooding on local roads. The issue of road drainage does not appear to have been considered in the RSA report. It is recommended that road pavement drainage is investigated and addressed appropriately.

Mof Road/WEL Haul Road intersection

Section 3.1 of the RSA report discusses various safety aspects relating to Mof Road/WEL Haul Road intersection. The RSA findings and recommendations relating to this intersection are generally concurred with.

The RSA however did not consider the potential requirement for physical intersection upgrade and the potential need for provision of new turn lanes in light of the expected

increase in traffic through this intersection. The combination of the existing traffic volume and the estimated future traffic flows at this intersection needs to be established to assess the need for intersection upgrade, including turn lanes, against Austroads warrants for such intersection upgrades.

Furthermore, it is recommended that swept paths are undertaken for the appropriate Design Vehicle (the largest vehicle expected to use this intersection) in order to establish any additional upgrades that may be required.

In addition to any intersection upgrade plans, a signage and line marking plan should be prepared and supplemented with any intersection upgrade proposal.

WEL Haul Road/Yara Ammonia Pipeline Crossing

Section 3.3.2 of the RSA discusses the identified risks and recommended risk-mitigating measures for the ammonia pipeline crossing.

Although the probability of a traffic incident occurring along the crossing is considered to be low, the result of any such incident is likely to be critical or even catastrophic both in terms of potential direct and indirect loss of life and economic impacts, and as such it is recommended that appropriate risk mitigation measures should be considered.

With the long-term LNG truck loading facility proposal, the level of daily traffic, including proportion of heavy vehicles, on this road will increase significantly.

The RSA report correctly states that safety barriers are a form of roadside hazard which could result in serious injury to the driver; however, the outcome of an errant vehicle running off the road and damaging the pipeline and the potential OHS and economic consequences resulting from such an event should also be considered.

Accordingly, it is recommended that appropriate physical barriers should be installed at the crossing along the sides of the WEL Haul Road but outside the clear zone. These barriers should be of appropriate material and design to withstand the impact from a fully laden double and triple road train which can be quite significant even at lower speeds.

Appropriate barrier concept plan indicating type, design, extent and properties of such barrier should be provided to inform all the stakeholders. As various high'n'wide loads may be transported along this route the proposed barriers should be designed to allow for temporary and easy removal and reinstallation.

The RSA recommends WEL Haul Road carriageway width reduction to 3.5m lanes in each direction and reduction of the speed limit to 30 km/h along the crossing. Although the recommendation to reduce the speed limit along the crossing is supported, it is considered that the carriageway width should be consistent along entire length of the road.

Due to the significance of the ammonia pipeline and in order to further reduce risks, it is recommended that adequate lighting should be installed through the crossing

area in accordance with the relevant standards so to improve visibility and safety during night times and during adverse weather conditions.

Additionally, the impact of the heavy vehicle traffic loading on WEL Haul Road pavement along the crossing and may affect the structural integrity of the pipeline under the road. This should be investigated and appropriate or additional protection for the pipeline under the pavement should be provided, as required.

WEL Haul Road Gatehouse

Section 3.4.2 of RSA recommends removal of the gatehouse if it's no longer in use, or alternatively, installation of a stop sign if the gate house is to be retained. If the gatehouse is to be retained, in addition to a stop sign it is recommended that consideration should also be given to adequate lighting, pavement markings and "Keep Left" signs similar to what is schematically shown in **Figure 1**.

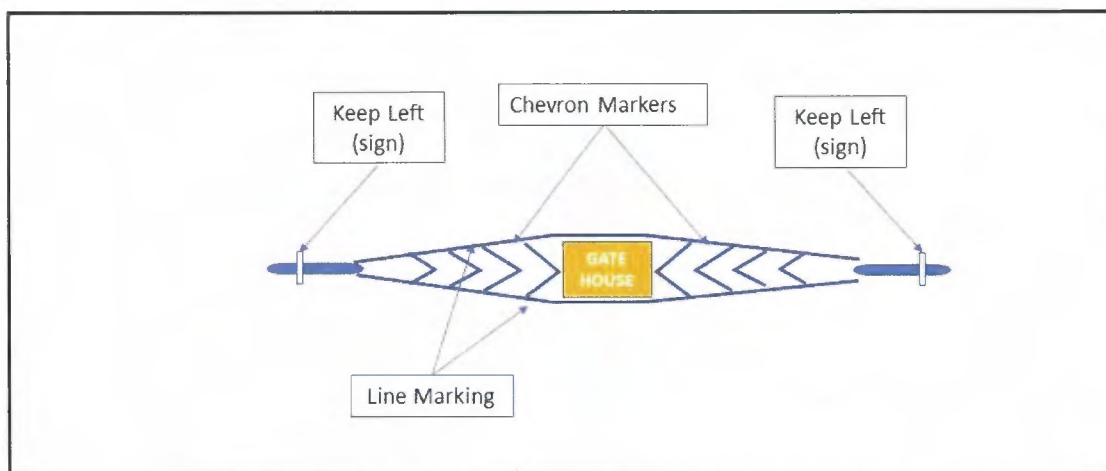


Figure 1: Gatehouse line marking and signage plan

WEL Haul Road/Service Road Y-intersection

RSA recommends that the existing WEL Haul Road/Service Road be improved through implementation of directional signage and carriageway line markings (Section 3.4.5). This recommendation is supported and it is further recommended that swept path analysis should be undertaken for the Design Vehicle through this intersection to inform the signage and line marking plans.

WEL Haul Road - Culverts

The RSA indicates that the existing culverts on WEL Haul Road would be taken out of the clear zone if the 8.0m wide carriageway with 3.0m clear zones standard for this road is implemented. Should Transcore's recommendation to provide a 10.0m wide carriageway be adopted, it is important to ensure that the culverts are still located outside the clear zones, or alternatively, investigate an alternative design for the existing culverts.

Pedestrian Emergency Exit Access on WEL Haul Road

RSA recommends that “Caution – Pedestrians Watch Out For Trucks” sign be installed at the end of the access path to warn pedestrians of the presence of trucks on WEL Haul Road. It is further recommended that a self-closing gate should be installed at the end of the access path (chainage 813) to further improve the path/road separation.

2.2 Roadside Hazard Risk Assessment - Review

The peer review of the *Roadside Hazard Risk Assessment on WEL Haul Road at Ammonia Pipeline Crossing (version No. 1.3) (hereafter RHRA)* prepared by EDGE Transport Solutions was also undertaken by Transcore during November 2017. The following general comments are provided in relation to the scope and methodology of the RHRA report:

- ✚ The RHRA clearly identifies the focus of the risk assessment;
- ✚ The RHRA provides some level of traffic data for the WEL Haul Road;
- ✚ Considering limited available traffic data information for the relevant roads the provided level of information is deemed adequate; and,
- ✚ The assessment methodology and proposed traffic-related risk mitigating measures recommended and described in the RHRA are generally considered to be sound.

In this report, apart from other relevant mitigating measures, installation of the roadside crash barriers is proposed to reduce the level of risk associated with potential physical impacts on the ammonia pipeline from “high” to “medium”.

As previously discussed, Transcore supports the installation of physical barriers on WEL Haul Road at the ammonia pipeline crossing to reduce the potential OH&S and economic consequences resulting from the potential truck driver loss of control and vehicle running off the road and consequently rupturing the ammonia pipeline. These barriers would need to be described and illustrated in appropriate concept plan appended to the report together with details relating to its type, design, extent and properties. As previously indicated these barriers may also need to be designed in such a way to allow for temporary and easy removal and reinstallation in order to accommodate occasional transport of high’n’wide loads along WEL Haul Road. In addition, the physical barriers should also be installed along the entire length of the infrastructure corridor crossing (minimum 50m) and not be limited to ammonia pipeline only.

2.3 Stakeholder Liaison Process

Transcore liaised with the relevant stakeholders as part of the peer review process in order to provide the stakeholders with the opportunity to identify any potential risks and concerns relating to the LNG truck loading facility proposal and the mitigating measures proposed in the RSA and RHRA reports. The outcome of the liaison process is summarised in **Table 1**.

Table 1: Stakeholder Liaison Outcome

Stakeholder	Date	Contact	Comments and Concerns
Yara Pilbara Fertilisers	20/11/20107	Brian Howarth	<ul style="list-style-type: none"> Impact on the integrity and safety of the pipeline due the increase in traffic volumes on WEL Haul Rd;
Pilbara Port Authority	28/11/20107	Peter King	<ul style="list-style-type: none"> Consideration of Mof Rd/WEL Haul Rd intersection re-design, future truck turning movements, vehicular speeds and provision of additional turning lanes; PPA supports intersection improvements (re-alignment, signage, lighting, removal of obstructions and line marking) but advises that the intersection would need to continue to be accessible to vehicles carrying large modules to and from the port in the future design; Needs to see a map illustrating extent of the proposed 40km/h Mof Rd (sic) speed limit (Transcore is not aware of a proposal to reduce speed limit of Mof Road to 40km/h); PPA intends to provide its comments to City of Karratha at the time of DA lodgement;
DJTSI	28/11/20107	Ben Peden	<ul style="list-style-type: none"> RHRA should have considered the full extent of WEL Haul Rd/infrastructure corridor crossing and not just the existing ammonia pipeline; Some clarifications relating to labelling of risk rating matrix elements presented in RHRA needed; Query relating to the pipeline rupture risk qualifications and the need for risk management measures in lieu of risk mitigating measures due to event significance; Proposed pipeline crash barriers perhaps to be supplemented by a road widening at the crossing or even additional bridgework/culverts for future pipelines; Reservations surrounding effectiveness of the proposed crash barriers against the impacts of fully laden heavy vehicles even at low speeds; Impacts of spilled LNG on other structures (embrittlement) not considered; Proposed pipeline crash barriers to be removable to support wide load transport along the WEL Haul Rd; Would the proposed truck loading LNG facility result in additional private vehicle traffic?
DMIRS	27/11/20107	Walter Law Patrick Senyia	<ul style="list-style-type: none"> DMIRS is strongly recommending that enhanced impact protection be installed at the WEL Haul Rd/pipeline crossing to reduce the

			likelihood of vehicular collision with the pipeline;
--	--	--	--

2.4 Summary of Recommendations

The following table (refer **Table 2**) provides a summary of recommendations, mitigating measures, management initiatives and actions recommended by Transcore to address the issues identified with the RSA and RHRA relevant to the proposed new LNG truck loading terminal at Woodside's Pluto LNG site in the Burrup Strategic Industrial Area including the associated risks.

Table 2: Summary of Recommendations

Specific Items	Recommendations
Traffic volumes on WEL Haul Rd & at Mof Rd/ WEL Haul Rd intersection	<ul style="list-style-type: none"> Undertake traffic counts for WEL Haul Rd and at WEL Haul Rd/Mof Rd intersection.
WEL Haul Rd – horizontal delineation	<ul style="list-style-type: none"> Install edge of carriageway line, centre line and raised pavement markers (i.e. cat's eyes) along entire length of WEL Haul Road; Roadside marker posts to be frangible and removable.
LNG weighbridge	<ul style="list-style-type: none"> Weighbridge to be clearly delineated, access and egress routes identified and adequate lighting provided.
WEL Haul Rd speed limit reduction	<ul style="list-style-type: none"> WEL haul Rd speed limit to remain at 40km/h; Propose reduced speed limit of 30km/h should apply only through infrastructure corridor, including ammonia pipeline crossing zone.
WEL Haul Rd carriage standard	<ul style="list-style-type: none"> A 10.0m trafficable carriageway with 2 X 3.0m clear zone on sides for WEL Haul Rd is recommended; Due to infrastructure corridor pinch point a 10.0m trafficable carriageway with 2 X 2.85m clear zone on sides to be provided through the crossing zone; Appropriate signage advising caution when approaching and crossing infrastructure corridor to be installed; Assessment of road pavement for anticipated heavy vehicles load impacts to ensure carriageway integrity is maintained; Road pavement drainage to be investigated and addressed.
Mof Rd/WEL Haul Rd intersection	<ul style="list-style-type: none"> Establish if the existing intersection meets criteria for turn treatments upgrade against Austroads with the anticipated increase in heavy vehicle traffic; Undertake swept path assessment using appropriate Design Vehicle template; Prepare appropriate intersection upgrade concept plans; Prepare appropriate signage and line marking plans.
WEL Haul Rd ammonia pipeline crossing	<ul style="list-style-type: none"> Install appropriate physical barriers along sides of road (outside clear zones) to sustain potential impact of fully laden double and triple road trains; Barriers to be installed through entire length of infrastructure corridor crossing area (minimum 50m); Barriers should also be easily removable to support high'n'wide load transport; Prepare appropriate barrier concept plans indicating type, design, extent and properties;

	<ul style="list-style-type: none"> ▪ Ensure the pipeline protection structure under the carriageway is sufficient to sustain additional traffic loads.
WEL Haul Rd gatehouse	<ul style="list-style-type: none"> ▪ Recommend removing the existing gatehouse on WEL Haul Rd if deemed redundant; ▪ If the gatehouse is to be retained install adequate lighting, pavement markings and signage.
WEL Haul Rd/Service Rd Y-intersection	<ul style="list-style-type: none"> ▪ Undertake swept path assessment using appropriate Design Vehicle template to inform signage and line marking plans.
WEL Haul Rd – culverts	<ul style="list-style-type: none"> ▪ Ensure that with the proposed carriageway widening to 10.0m existing culverts are still located outside the clear zones, or alternatively, consider alternative culvert design.
Pedestrian emergency exit access on WEL Haul Rd	<ul style="list-style-type: none"> ▪ Install a self-closing gate at the end of the pedestrian access path and just before WEL Haul Rd.



mainroads
WESTERN AUSTRALIA

Enquiries: Anthony Williams (08) 9172 8807
Our Ref: 06/4710 D18#123535
Your Ref: NA

16 February 2018

Chris Sayer
Principal Statutory Planner
City of Karratha
Via Email: chris.sayer@karratha.wa.gov.au

Dear Mr Sayer

**PROPOSED LIQUEFIED NATURAL GAS ('LNG') TRUCK LOADING TERMINAL
AND WEIGHBRIDGE – LOTS 384 AND 573 MOF ROAD, BURRUP.**

Main Roads WA (Main Roads) refer to your correspondence dated 8 February 2018 with regards to the development application for the abovementioned proposal. Main Roads have no objections to the activities proposed in the application.

Please note that the process to change Restricted Access Vehicle (RAV) access to Lots 384 and 573 Mof Road, Burrup, will require an application to Main Roads and be subject to a route assessment conducted in accordance with Route Assessment Guidelines available on the Main Roads website.

Should you have any queries in regards to the above information please do not hesitate to contact Anthony Williams at Anthony.Williams@mainroads.wa.gov.au or on (08) 9172 8807 for further information.

Yours sincerely

Maria Drysdale
NETWORK MANAGER
PILBARA REGION

Your Ref:
Our Ref: A565674
Enquiries: Karen Hayes



11 December 2017

Mr Chris Sayer
Principal Statutory Planner
City of Karratha
PO Box 219
KARRATHA WA 6714

CITY OF KARRATHA
RECEIVED

13 DEC 2017

Action By: Susan Babao
File No: A91505
Document ID: 1CR75194
CC:

Dear Chris

**PROPOSED LIQUEFIED NATURAL GAS (LNG) TRUCK LOADING TERMINAL AND
WEIGHBRIDGE – LOTS 384 AND 573 MOF ROAD, BURRUP**

I refer to your recent email correspondence of 29 November 2017 regarding Woodside Energy Limited (**Woodside**)'s development application to construct and operate a liquefied natural gas (**LNG**) truck loading terminal and weighbridge on Lots 384 and 573 MOF Road, Burrup.

Pilbara Ports Authority (**PPA**) has reviewed the development application report provided by the City of Karratha (**CoK**) along with the 'Road Safety Audit and Roadside Hazard Assessment' report previously provided to PPA by LandCorp. PPA understands from these documents that initially (i.e. base case scenario) up to two trucks (one way) or four trucks (return trip) are proposed each day, during daylight hours only; and that eventually (i.e. expanded scenario) that up to 48 trucks (one way) or 96 trucks (return trips) are proposed each day, operating around the clock (i.e. 24 hour operation).

PPA's interest in this development application relates to the MOF Road / Haul Road intersection, traffic movements along MOF Road on approach to the intersection (from both directions), turning vehicles at the intersection, and the existing posted speed limit on MOF Road.

PPA supports the recommendations of the 'Road Safety Audit and Roadside Hazard Assessment' report with respect to intersection improvements, such as the proposed re-alignment of the intersection, signage, lighting, removal of obstructions, and line marking. However, it should be noted that the intersection is configured to accommodate the movement of large modules being moved from the port into the Pluto LNG plant site. Any future expansions at Pluto will again involve moving large modules through the intersection. This requirement should be taken into account in any reconfiguration of the intersection. PPA would also like to see further design work with respect to the inclusion of a turning lane on MOF Road.

PPA does object to any change in the posted speed limit on MOF Road and would not support a reduction in the posted speed limit to 40 km/hr.

If you wish to discuss any aspect of this correspondence, please do not hesitate to contact the undersigned on telephone (08) 6217 7102 or email peter.king@pilbaraports.com.au.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Peter King'.

Peter King
Director Port Development

CORPORATE OFFICE

T (08) 6217 7112 F (08) 9226 2196 E info@pilbaraports.com.au www.pilbaraports.com.au
Postal Address PO Box 84, West Perth, Western Australia 6872 ABN 94 987 448 870

Susan Babao

From: SENYCIA, Patrick <patrick.senycia@dmirs.wa.gov.au>
Sent: Tuesday, 5 December 2017 3:02 PM
To: Chris Sayer
Cc: BARNARD, Marc; Brian Howarth (Brian.Howarth@yara.com); BORA, Pranjali;
GRANNAS, Linda; michael.knuckey@woodside.com.au
Subject: Proposed Liquefied Natural Gas ('LNG') Truck Loading Terminal and Weighbridge -
Referral from City of Karratha

Dear Mr Sayer,

Re: Proposed Liquefied Natural Gas ('LNG') Truck Loading Terminal and Weighbridge – Lots 384 and 573 Mof Road, Burrup

Thank you for your email of 29 November 2017 requesting comments in relation to the abovementioned proposal.

I advise that in principle the DMIRS does not have any objection to the proposal. However, the DMIRS will seek to convene a meeting with Woodside and Yara to discuss the ammonia pipeline – road crossing.

Note that the proposal will be subject to compliance with the *Dangerous Goods Safety Act 2004* and relevant associated regulations.

Regards,

Patrick Senycia | Principal Inspector On Shore | Dangerous Goods and Petroleum Safety Branch

Department of Mines, Industry Regulation and Safety

Tel: +61 8 9358 8044 | Mob: 0418 914 530

patrick.senycia@dmirs.wa.gov.au | www.dmirs.wa.gov.au



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Before you take any action based upon advice and/or information contained in this email you should carefully consider the advice and information and consider obtaining relevant independent advice.

Susan Babao

From: Browne, Sean <Sean.Browne@dplh.wa.gov.au>
Sent: Wednesday, 24 January 2018 2:14 PM
To: Chris Sayer
Subject: RE: Proposed Liquefied Natural Gas ('LNG') Truck Loading Terminal and Weighbridge - Referral from City of Karratha

Hi Chris,

Apologies, I must have missed this one.

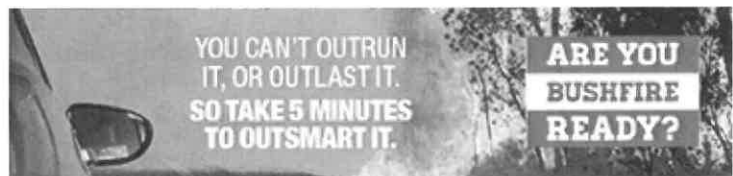
I have reviewed the application and can advise that DPLH has no comment.

Thank you,
Sean

Sean Browne | Senior Project Officer | Major Projects
Level 2, 140 William Street, Perth WA 6000
(08) 6552 4708 | 0428 945 906
www.dplh.wa.gov.au



Department of Planning,
Lands and Heritage



The department acknowledges the Aboriginal peoples of Western Australia as the traditional custodians of this land and we pay our respects to their Elders, past and present.

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From: Chris Sayer [mailto:chris.sayer@karratha.wa.gov.au]
Sent: Monday, 22 January 2018 2:43 PM
To: Browne, Sean; 'sean.browne@dplh.wa.gov.au'
Subject: FW: Proposed Liquefied Natural Gas ('LNG') Truck Loading Terminal and Weighbridge - Referral from City of Karratha

Hi Sean

I am not sure if the email below along with the attached made it through to you. Could you please provide any comment you may have and if no comment, could you please inform me of this via return email.

Regards

Chris Sayer
Principal Statutory Planner



Direct: (08) 9186 8674
Email: chris.sayer@karratha.wa.gov.au
Mob: 0429 728 121
Fax: (08) 9185 1626
www.karratha.wa.gov.au

From: Chris Sayer

Sent: Wednesday, 29 November 2017 9:58 AM

To: 'Peter.King@pilbaraports.com.au' <Peter.King@pilbaraports.com.au>; 'christine.ginbey@jtsi.wa.gov.au' <christine.ginbey@jtsi.wa.gov.au>; 'Vaughan.Brazier@landcorp.com.au' <Vaughan.Brazier@landcorp.com.au>; 'Brian.Howarth@yara.com' <Brian.Howarth@yara.com>; 'Sean.Browne@lands.wa.gov.au' <Sean.Browne@lands.wa.gov.au>; 'patrick.senycia@dmirs.wa.gov.au' <patrick.senycia@dmirs.wa.gov.au>; 'nwsgovernance@woodside.com.au' <nwsgovernance@woodside.com.au>; 'christopher.slavin@dwer.wa.gov.au' <christopher.slavin@dwer.wa.gov.au>

Subject: Proposed Liquefied Natural Gas ('LNG') Truck Loading Terminal and Weighbridge - Referral from City of Karratha

Proposed Liquefied Natural Gas ('LNG') Truck Loading Terminal and Weighbridge – Lots 384 and 573 Mof Road, Burrup.

City of Karratha Seeks Comment on Proposal

The City of Karratha is assessing a proposed development for a truck loading facility associated with Woodside's Pluto LNG plant and is seeking any comments from relevant authorities and stakeholders to assist with the City's assessment. Should you consider there are others within your organisation you feel should be considering this matter please forward this email onto that person/s or otherwise it would be appreciated if you could provide me with that persons contact details.

Attached for your review is a copy of the submitted report to support the proposed development prepared by Woodside's consultants, Rowe Group.

The City, with all proposed developments, seeks to make assessment in as quick a turnaround timeframe as possible and seeks your assistance by providing a response to this email by Wednesday 13 December or earlier. Please forward your comments via return email to myself.

Should you have any queries in regard to providing a response please contact me on the numbers below.

Regards

Chris Sayer
Principal Statutory Planner



Direct: (08) 9186 8674

Susan Babao

From: DFES Advisory Services <advice@dfes.wa.gov.au>
Sent: Monday, 22 January 2018 3:50 PM
To: Chris Sayer
Subject: Lots 384 and 573 Mof Road, Burrup - Proposed Liquefied Natural Gas ('LNG') Truck Loading Terminal and Weighbridge - DFES Response
Attachments: Development Application Report - Proposed LNG Truck Loading Facility.pdf; Update to Process for Land Use Planning Referral to DFES

DFES Ref: D04527

Dear Chris

Apologies for the late response however I believe your original enquiry was sent to the wrong area within DFES and was not forwarded to Advisory Services.

Advisory Services wrote to all Local Governments in February 2017 and most recently in 27 November 2017 (addressed to ceo@karratha.wa.gov.au) advising of a change to the process for all land use planning referrals and the triggers for referral through to DFES (I've attached the most recent correspondence for you) for any future planning referrals / queries.

I refer to your email below for the above development application. Can you please confirm if *State Planning Policy 3.7 – Planning in Bushfire Prone Areas* (SPP 3.7) applies. The area proposed for development is in a bushfire prone area however the attached report states that there are no permanent employees onsite. Planning Bulletin 111/2016 states that planning applications may be exempt from State Planning Policy 3.7 if the proposal '*does not result in the intensification of development (or land use), does not result in an increase in residents or employees, or does not involve the occupation of employees on site for any considerable amount of time....*'.

The full bulletin can be found on the DPLH website: <https://www.planning.wa.gov.au/publications/6923.aspx>

Should you apply SPP 3.7 then, we request the relevant information pursuant to policy measure 6.5 be forwarded to DFES to allow us to review and provide bespoke comment.

If you would like to discuss any aspect of this email please contact me on the number below.

Many thanks

Sasha De Brito

Advisory Services Coordinator

Hazard Planning and Response | Capability Command

Department of Fire and Emergency Services | 20 Southport Street West Leederville WA 6007

p: 9482 1764 | e: advice@dfes.wa.gov.au | w: www.dfes.wa.gov.au



Government of Western Australia
Department of Fire & Emergency Services



From: Chris Sayer [mailto:chris.sayer@karratha.wa.gov.au]

Sent: Monday, 22 January 2018 2:33 PM

To: BEBadmin <BEBadmin@dfes.wa.gov.au>

Subject: FW: Proposed Liquefied Natural Gas ('LNG') Truck Loading Terminal and Weighbridge - Referral from City of Karratha

The City of Karratha is following up on the earlier email forwarded to DFES (below) and determining whether DFES is intending to respond to the email or not. Could you please provide any comment on the proposal or alternatively inform me via return email that there is no comment from DFES.

Regards

Chris Sayer
Principal Statutory Planner



Direct: (08) 9186 8674

Email: chris.sayer@karratha.wa.gov.au

Mob: 0429 728 121

Fax: (08) 9185 1626

www.karratha.wa.gov.au

From: Chris Sayer

Sent: Wednesday, 29 November 2017 10:03 AM

To: 'bebadmin@dfes.wa.gov.au' <bebadmin@dfes.wa.gov.au>

Subject: Proposed Liquefied Natural Gas ('LNG') Truck Loading Terminal and Weighbridge - Referral from City of Karratha

Proposed Liquefied Natural Gas ('LNG') Truck Loading Terminal and Weighbridge – Lots 384 and 573 Mof Road, Burrup.

City of Karratha Seeks Comment on Proposal

The City of Karratha is assessing a proposed development for a truck loading facility associated with Woodside's Pluto LNG plant and is seeking any comments from relevant authorities and stakeholders to assist with the City's assessment. This is not a request to review plans associated with a building permit. The City is seeking comment to assist with assessment of a development application under the Planning and Development Act. The City was unsure from your website what other area within DFES to forward this request for comment to if this is not the correct area.

Should you consider there are others within your organisation you feel should be considering this matter please forward this email onto that person/s or otherwise it would be appreciated if you could provide me with that persons contact details.

Attached for your review is a copy of the submitted report to support the proposed development prepared by Woodside's consultants, Rowe Group.

The City, with all proposed developments, seeks to make assessment in as quick a turnaround timeframe as possible and seeks your assistance by providing a response to this email by Wednesday 13 December or earlier. Please forward your comments via return email to myself.

Should you have any queries in regard to providing a response please contact me on the numbers below.

Regards

Chris Sayer
Principal Statutory Planner



Direct: (08) 9186 8674

Email: chris.sayer@karratha.wa.gov.au

Mob: 0429 728 121

Fax: (08) 9185 1626

www.karratha.wa.gov.au

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Susan Babao

From: Dave Orchard <david.orchard@yara.com>
Sent: Wednesday, 13 December 2017 1:43 PM
To: Chris Sayer
Subject: Proposed Liquefied Natural Gas ('LNG') Truck Loading Terminal and Weighbridge - Referral from City of Karratha

Dear Chris,

Thank you for your email requesting Yara Pilbara's feedback, for the City of Karratha assessment of a truck loading facility, associated with Woodside's Pluto LNG plant.

As the operator of two Major Hazard Facilities and an associated ammonia export pipeline potentially affected by this change, Yara Pilbara welcomes the opportunity to provide comment. Representatives from Yara Pilbara and Woodside have communicated on several occasions, and Yara Pilbara is pleased to provide its consent to the proposed change, based on the implementation of the controls identified within the Roadside Hazard Risk Assessment (Ver 1.3, 23.11.2017), in addition to the following:

- 1) The Location Specific Individual Risk (LSIR) at the ammonia pipeline crossing associated with vehicle movements, remains below industry risk tolerability criteria, including criteria used by Yara;
- 2) The additional controls proposed by Yara Pilbara (i.e. "Audio Tactile Edge Line" pavement marking, speed bumps, GPS speed alarms/restrictors on trucks, or other suitable means to ensure adherence to the 30km/h speed limit) are considered by Woodside, in terms of the reasonable practicability of implementation of such, for protection of the ammonia pipeline from vehicle impact at the Woodside Haul Road crossing;
- 3) In the event that use of triple road trains is considered, the existing controls be revisited to ensure adequacy (i.e. the protection barriers where the Woodside Haul Road cross the ammonia pipeline are to be sized for use with A-double road trains, as Woodside have indicated the barrier protection utilised at the MOF Road crossing would be unsuitable at the Woodside Haul Road crossing).

The Department of Mines, Industry, Regulation and Safety are Yara Pilbara's primary regulator, and have expressed interest in meeting with Yara Pilbara and Woodside, to properly understand the potential impacts of this change. As such, Yara Pilbara have agreed with Woodside that a meeting between suitable representatives from the three organisations is to be scheduled.

Once again, I thank you for the opportunity to provide comment on this proposal, and look forward to future collaboration between the City of Karratha and other stakeholders based on the Burrup.

Yours sincerely,
Dave Orchard
Process Safety Lead Engineer
Production
Site Operations
Office: +618 9183 4135
Email: david.orchard@yara.com



Lot 564 Village Road
WA 6714 Burrup Peninsula, Australia
www.yara.com



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**ROAD UPGRADE
DEED**

LandCorp

Woodside Energy Ltd

Ref: 180154
Doc ref: 2878229_19.docx

Sydney

Level 3, 5 Lime Street
Sydney NSW 2000
T / +61 (2) 8075 1700

Perth

Level 9, 863 Hay Street
Perth WA 6000
T / +61 (8) 9216 7100

ROAD UPGRADE DEED

PARTIES:

Name:	Western Australian Land Authority trading as LandCorp	LandCorp
Address:	Level 6, 40 The Esplanade Perth Western Australia	

Name:	Woodside Energy Ltd	Woodside
ACN:	005 482 986	
Address:	Woodside Plaza, 240 St Georges' Terrace Perth Western Australia	

BACKGROUND

- (a) LandCorp owns the land within the Pluto LNG Site and Lot 573 within the Haul Road Site.
- (b) LandCorp is also the primary interest holder in Lot 566 within the Haul Road Site.
- (c) Woodside has a lease with LandCorp over the Pluto LNG Site known as the Pluto LNG Site A Lease. Part of that site is then subleased to CUFCo pursuant to sublease L621960.
- (d) Woodside has a lease with LandCorp over Lot 573 known as the Pluto Haul Road Lease. Part of that site is then subleased to CUFCo pursuant to sublease L621961.
- (e) Woodside also has an easement over Lot 566 known as the East West Service Corridor.
- (f) Woodside (on behalf of CUFCo and a marketing Affiliate of Woodside) is proposing to undertake the Activities on the Pluto LNG Site and Haul Road Site.
- (g) In order to undertake the Activities, Woodside requires LandCorp to sign a Development Application in relation to parts of the land within the Pluto LNG Site A Lease and parts of the land within the Pluto Haul Road Lease.
- (h) As a condition of LandCorp signing the Development Application to permit Woodside to submit the Development Application for planning approval to undertake the Activities LandCorp requires Woodside to commit to undertake the Works.
- (c) The Parties have agreed to enter into this Deed to record Woodside's obligations to undertake and maintain the Works.

OPERATIVE PART

The Parties agree in consideration of, among other things, the mutual promises contained in this Deed:

1 DEFINITIONS

- 1.1 In this Deed unless inconsistent with the context or subject matter the following terms have the following meanings:

Activities means the currently proposed activities of:

- (a) establishing and operating a LNG truck loading facility on part of the area within the Pluto LNG Site A Lease;
- (b) establishing and operating a weighbridge on the Pluto Haul Road Lease; and

- (c) a LNG truck distribution business that traverses the Haul Road Site as it travels between the LNG truck loading facility and the public MOF Road on the Burrup Peninsula.

Affiliate or Affiliates means, in relation to any person:

- (a) the ultimate holding company of a party;
- (b) any company controlled by that ultimate holding company; or
- (c) any company controlling or controlled by a party.

In this definition one company controls another company when at the relevant time it owns either directly or indirectly not less than 50% of the shares entitled to vote at general meetings of that other company. A company is an ultimate holding company when at the relevant time it controls another company but itself is not controlled by another company. Nothing in this definition shall prevent a company from having more than one ultimate holding company.

Claims means all actions, penalties, suits, demands, claims, losses, damages or costs (including legal costs on a solicitor and client basis).

Commencement Date means the date the last Party executes this Deed.

Corridor means the "East West Service Corridor" (being Lot 566) over which LandCorp holds the Corridor Head Lease.

Corridor Easement means Easement K553593 between the State of Western Australia (as grantor) and Woodside (as grantee) over the Corridor.

Corridor Head Lease means Lease N657873 between the State (as lessor) and LandCorp (as lessee) over the Corridor.

CUFCo means Burrup Facilities Company Pty Ltd which is the Pluto LNG Project entity (owned by Woodside Burrup Pty Ltd (90%), Kansai Electric Power Australia Pty Ltd (5%) and Tokyo Gas Pluto Pty Ltd (5%)) that owns and operates the project's LNG storage and loading facilities (amongst other facilities).

Deed means this deed.

Development Application means an application for planning approval by Woodside Energy Ltd as lessee over Lots 384 on Deposited Plan 220146 being the whole of the land in Certificate of Title Volume 2671 Folio 981 (being the Pluto LNG Site) and Lot 573 on Deposited Plan 28209 being the whole of the land in Certificate of Title Volume 2676 Folio 184 (being Lot 573) (together, the **Land**) for the development of a Liquefied Natural Gas (**LNG**) truck loading terminal and weighbridge on the Land to provide an additional delivery point for the supply of LNG from the existing Pluto LNG Plant.

Existing Relevant Pluto Tenure Arrangements means the Pluto Haul Road Lease, Pluto LNG Site A Lease, and Corridor Easement.

Haul Road Site means:

- (a) Lot 566; and
- (b) Lot 573.

Local and Public Authorities shall have the meaning set out in the Pluto Haul Road Lease.

Lot 566 means lot 566 on Deposited plan 28209 being the whole of the land in Crown Land Certificate of Title Volume LR3125 Folio 317 known as the "East West Service Corridor" (or "Corridor" in this Deed).

Lot 573 means lot 573 on Deposited Plan 28209 being the whole of the land in Certificate of Title Volume 2676 Folio 184.

Parties mean LandCorp and Woodside.

Pluto LNG Site A Lease means Lease K435292 between LandCorp (as lessor) and Woodside (as lessee) known as Pluto Site A.

Pluto LNG Site A Sub-Lease means sublease L621960 between Woodside (as sublessor) and CUFCo (as sublessee).

Pluto LNG Site means the land the subject of the Pluto LNG Site A Lease and Pluto LNG Site A Sub-Lease.

Pluto Haul Road Lease means Lease K545946 between LandCorp (as lessor) and Woodside (as lessee).

Pluto Haul Road Sub-Lease means sublease L621961 between Woodside (as sublessor) and CUFCo (as sublessee).

Pre-Assembled Units shall have the meaning set out in the Corridor Easement.

Prudent Industry Practice means in relation to the design, construction and installation of the Works, practices, methods, specifications, standards of safety, design and performance (including but not limited to standards relating to the operation and maintenance of the Works) that are commonly used by skilled and experienced contractors who perform such work in Australia.

Recommendations means those recommendations set out in Annexure A.

State means the State of Western Australia acting through the Minister for Lands.

Term means the term as mentioned in **clause 2** of this Deed.

Third Party Access Rights Holder means any person that at the relevant time holds "Third Party Access Rights" (as defined in the Corridor Easement) in respect to Lot 566, including Burrup Fertilisers Pty Ltd as the holder of a sublease over part of Lot 566.

Woodside's Employees, Agents and Visitors means each of the employees, agents, contractors, service suppliers, sub-lessees, licensees, customers, invitees and other visitors of Woodside and its relevant Affiliates and any other person who at any time is on the Corridor and/or the with the consent of Woodside or its relevant Affiliates.

Works means all road upgrades works set out in Annexure A.

1.2 In this Deed, unless the contrary intention appears:

- (a) words importing the singular include the plural and vice versa;
- (b) words importing any gender include the other genders;
- (c) other grammatical forms of defined words and expressions have corresponding meanings;
- (d) references to persons include corporations and bodies politic;
- (e) references to a person include the legal personal representatives, successors and assigns of that person;
- (f) a reference to a statute, ordinance, code or other law includes regulations and other statutory instruments under it and consolidations, amendments, re-enactments or replacements of any of them (whether of the same or any other legislative authority having jurisdiction);
- (g) references to this or any other document include the document as previously varied or replaced, or otherwise varied or replaced from time to time and notwithstanding any change in the identity of the Parties;
- (h) references to writing include any mode of representing or reproducing words in tangible and permanently visible form and includes facsimile transmissions;
- (i) an obligation of two or more Parties binds them jointly and severally;
- (j) if a word or expression is defined, cognate words and expressions have corresponding definitions;
- (k) references to an association, body or authority which is reconstituted, amalgamated, reconstructed or merged or the functions of which have become exercisable by any other person, association, body or authority in its place shall be taken to refer to the

person, association, body or authority established or constituted in its place or by which its functions have become exercisable;

- (l) reference to any thing is a reference to the whole or any part of it and a reference to a group of things or persons is a reference to any one or more of them;
- (m) reference to a month and cognate terms means a period commencing on any day of a calendar month and ending on the corresponding day in the next succeeding calendar month, but if a corresponding day does not occur in the next succeeding calendar month the period shall end on the first day of the next succeeding calendar month;
- (n) references to this document includes any schedules, annexures and exhibits;
- (o) headings are inserted for ease of reference only and shall be ignored in construing this document;
- (p) references to time are to local time in Western Australia;
- (q) where time is to be reckoned from a day or event that day or the day of that event shall be excluded;
- (r) a reference to a business day is a reference to a day other than a Saturday, Sunday or gazetted public holiday in Western Australia;
- (s) the word "include" used when introducing a list of items does not limit the meaning of the words to which the list relates to those items or to items of a similar kind; and
- (t) a provision of this document must not be construed to the disadvantage of a Party merely because that Party was responsible for the preparation of this document or the inclusion of the provision in this document.

2 TERM

This Deed commences on the Commencement Date and expires when the Activities in respect to sub-paragraph (c) in the definition of Activities cease.

3 WOODSIDE'S OBLIGATIONS

- (a) Subject to clauses 3(b) and 3(c), Woodside covenants and agrees with LandCorp:
 - (i) to undertake and complete the Works; and
 - (ii) to comply with all the Recommendations,
prior to the Activities commencing (other than in respect of those Recommendations which are ongoing in their nature), and upon completion of the Works, Woodside will to the extent not already required under the Existing Relevant Pluto Tenure Arrangements, regularly maintain the Works (to the extent located outside of the Existing Relevant Pluto Tenure Arrangements) in a good, clean and safe condition and in accordance with Prudent Industry Practice and otherwise in accordance with the reasonable requirements of LandCorp.
- (b) The obligations of Woodside under clauses 3 and 5 expire when the Activities in respect to sub-paragraph (c) in the definition of Activities cease.
- (c) Where any part of the Works or any Recommendation in the Report can only be implemented with the approval of or by the City of Karratha, the Pilbara Port Authority or another government or regulatory body, Woodside covenants and agrees with LandCorp to use its reasonable endeavors to procure such approval or that such body implements the relevant part of the Works or the relevant Recommendation, and the obligation on Woodside to comply with the relevant obligation in clause 3(a) applies on and from the date that body gives such approval or implements the relevant part of the Works or the relevant Recommendation.

4 LANDCORP'S OBLIGATIONS

Subject to Woodside entering into this Deed, LandCorp agrees:

- (a) to sign the Development Application;
- (b) that the definition of "Permitted Use" in the Pluto LNG Site A Lease is broad enough to encapsulate:
 - (i) the carrying out of (and maintenance of) the Works and the carrying out of the Recommendations;
 - (ii) establishing and operating a LNG truck loading facility;
 - (iii) carrying out of (and maintenance of) roadworks and other improvements to the ingress and egress points to the LNG truck loading facility;
 - (iv) establishing and operating a weighbridge; and
 - (v) running a LNG truck distribution business;
- (c) that the definition of "Permitted Use" in the Pluto Haul Road Lease is broad enough to encapsulate:
 - (i) the carrying out of (and maintenance of) the Works and the carrying out of the Recommendations;
 - (ii) establishing and operating a weighbridge;
 - (iii) carrying out of (and maintenance of) roadworks and other improvements to the ingress and egress points to the weighbridge; and
 - (iv) running a LNG truck distribution business.

5 INSURANCE

- (a) In carrying out and maintaining the Works (but only in respect of Works carried out and maintained within the area on Lot 566), and conducting the Activities (only in respect to sub-paragraph (c) in the definition of Activities, and only insofar as those Activities are carried out within Lot 566) Woodside must maintain the following insurance policies with a reputable insurer:
 - (i) product liability insurance for an amount of indemnity of not less than \$10,000,000 for any one occurrence; and
 - (ii) a public liability policy including cover in respect of any person or damage to property arising out of the Works and the Activities (only in respect to sub-paragraph (c) in the definition of Activities) and obligations of Woodside under this deed for an amount of indemnity for any one occurrence of not less than \$100,000,000.00.
- (b) In respect of the insurances required by clause 5.1(a), Woodside must:
 - (i) arrange for the policies to extend to LandCorp for its liability as a principal arising out of this Deed or the Works;
 - (ii) if LandCorp requests, give LandCorp within 30 days of LandCorp's request copies of the certificates of insurance;
 - (iii) pay each premium on the due date or within insurers' normal credit terms;
 - (iv) immediately rectify anything which might prejudice any insurance and reinstate the insurance if it lapses;
 - (v) notify LandCorp as soon as practicable when:
 - (A) an event occurs which gives rise or is reasonably expected to give rise to a claim that relates to this deed; or
 - (B) any policy of insurance referred to in clause 5.1(a) is cancelled;

- (vi) immediately reinstate any policy if necessary after a claim is made;
 - (vii) increase the sums insured under clause 5.1(a) when reasonably required to do so by LandCorp (which may not be more frequently than once each year) to an amount reasonably specified by LandCorp subject always to commercial availability of insurance on reasonable terms.
- (c) In carrying out and maintaining the Works (but only in respect of Works carried out and maintained within Lot 566) and in carrying out the Activities within the area on Lot 566 (only in respect to sub-paragraph (c) in the definition of Activities) - if Woodside does or permits to be done any act, matter or thing which has the effect of invalidating or avoiding any payment by the insurer for the benefit of LandCorp, then Woodside shall pay to LandCorp the amount of any damage or loss which LandCorp may suffer or incur as a result such insurance policy being invalidated.

6 INDEMNITY

- (a) Notwithstanding the existence of any policy or policies of insurance in the name of LandCorp and any other person including Woodside or that Woodside or any other person may hold a licence, permit or authority from any local or public authority, Woodside hereby indemnifies and agrees to keep indemnified LandCorp from and against all damage, sums of money, costs, charges, expenses, actions, Claims and demands which may be claimed, sustained or suffered by LandCorp or recovered or made by Woodside (or any other person) against LandCorp arising out of or in connection with:
- (i) loss or damage to Lot 566 or any adjoining or nearby property caused by Woodside or Woodside's Employees, Agents and Visitors while carrying out or maintaining the Works (but only in respect of Works carried out and maintained within Lot 566) and Activities carried out within Lot 566 (only in respect to sub-paragraph (c) in the definition of Activities) PROVIDED THAT Woodside is not responsible for any such loss or damage to the extent caused or contributed to by the act, neglect or default of LandCorp its employees, agents or contractors or of those persons who LandCorp permits to enter upon or use Lot 566;
 - (ii) any injury, death or illness Woodside or any other person may sustain when on or near, using or entering Lot 566 while undertaking the Works (but only in respect of Works carried out and maintained within Lot 566) and the Activities carried out within Lot 566 (only in respect to sub-paragraph (c) in the definition of Activities) PROVIDED THAT Woodside is not be responsible for any injury, death or illness to the extent caused or contributed to by the act, neglect or default of LandCorp or their respective employees, agents or contractors or of those persons who LandCorp permits to enter upon or use Lot 566;
 - (iii) any contamination or pollution of Lot 566 or any land or groundwater adjoining or near Lot 566 and of the air generally above Lot 566 (including sudden and accidental occurrences) caused or contributed to by any act or omission of Woodside or Woodside's Employees, Agents and Visitors while undertaking the Works and the Activities carried out within Lot 566 (only in respect to sub-paragraph (c) in the definition of Activities);
 - (iv) any breach of the Woodside's covenants under this Deed; and
 - (v) the proper exercise or attempted exercise of LandCorp's remedies under this Deed or at law.
- (b) The obligations of Woodside under this clause:
- (i) are unaffected by any insurance taken out by Woodside and the obligations of Woodside to indemnify are paramount; and

- (ii) continue after the expiration or earlier determination of this Deed in respect of any act, deed, matter or thing occurring before the expiration or earlier determination of this Deed.

7 DISPUTE RESOLUTION

If there is a dispute, question or difference between the Parties with respect to any matter the subject of this Deed, then senior managers of each of the relevant Parties in dispute must meet as soon as possible and negotiate in good faith in an effort to settle the dispute, question or difference.

8 COSTS & MISCELLANEOUS


- 8.1 Each Party must pay its own legal costs of and incidental to the preparation, negotiation and execution of this Deed. Woodside must pay for any duty assessed by the Western Australian Office of State Revenue on this Deed (if any).
- 8.2 This Deed is to be governed by, and construed according to the laws of Western Australia.
- 8.3 Each Party submits to the non-exclusive jurisdiction of the courts exercising jurisdiction in Western Australia and any court that may hear appeals from any of those courts for any proceedings in connection with this Deed, and waives any right it may have to claim that those courts are an inconvenient forum.
- 8.4 Unless application is mandatory by law, a statute, proclamation, order, regulation or moratorium, present or future, is not to apply to this Deed so as to abrogate, extinguish, impair, diminish, fetter, delay or otherwise affect prejudicially rights, powers, privileges, remedies or discretions given or accruing to a Party.
- 8.5 If a condition, covenant or stipulation of this Deed or the application of them to a person or circumstances is or becomes invalid or unenforceable, the remaining covenants conditions and stipulations are not to be affected by the invalidity or enforceability and each covenant, condition and stipulation of this Deed will be valid and enforceable to the fullest extent permitted by law.
- 8.6 A provision of, or a right created under, this Deed may not be:
- (a) waived except in writing signed by the Party granting the waiver; or
 - (b) varied except in writing signed by all Parties.
- 8.7 Unless otherwise expressly provided, the failure on the part of any Party at any time to enforce any of its rights or to exercise any option or discretion in accordance with this Deed will not be construed as a waiver of the provisions of this Deed or prejudice that Party exercising such rights or the exercise of any such option or discretion.
- 8.8 Each Party agrees to sign, execute and complete all further assurances and documents and to do all things reasonably required to complete the matters set out in, or contemplated by this Deed.
- 8.9 This Deed comprises the whole agreement between the Parties and, subject only to any provision expressly to the contrary, supersedes all prior agreements and understandings between the Parties.
- 8.10 This Deed may consist of a number of counterparts. The counterparts taken together constitute one instrument.

9 BARRIERS

- 9.1 Woodside must not commence the installation, as part of the Works, of barriers on each side of the road that crosses the East-West Service Corridor until Woodside has:
- (a) finalised the design and specifications of the barriers following consultation with LandCorp and relevant Third Party Access Rights Holders; and
 - (b) obtained the approval of LandCorp to the design and specifications of the barriers (such approval not to be unreasonably withheld by LandCorp, but which may take into account the interests of any relevant Third Party Access Rights Holders and the Department of Jobs, Tourism, Science and Innovation) and (if required by law) obtained the approval of any relevant Local and Public Authorities.
- 9.2 Woodside must not commence the Activities in respect to sub-paragraph (c) in the definition of Activities until Woodside has constructed the barriers in accordance with the design and specifications agreed in clause 9.1.
- 9.3 Subject to clause 9.4, the barriers must remain in place at all times.
- 9.4 LandCorp acknowledges and agrees that Woodside may need to remove the barriers for periods of time to enable Pre-Assembled Units, earth moving equipment or other heavy haulage items and materials to be transported along the Haul Road Site. Before the commencement of the Works and each period when the barriers will be removed, Woodside must:
- (a) develop in consultation with LandCorp and relevant Third Party Access Rights Holders additional safety measures and procedures that will apply during such periods to enable the Works to commence before the barriers are installed and the Activities to continue while the barriers are removed; and
 - (b) obtain the approval of LandCorp to such additional safety measures and procedures (such approval not to be unreasonably withheld by LandCorp, but which may take into account the interests of any relevant Third Party Access Rights Holders and the Department of Jobs, Tourism, Science and Innovation) and (if required by law) obtain the approval of any relevant Local and Public Authorities.


EXECUTED BY THE PARTIES AS A DEED:

SIGNED on behalf of the **WESTERN AUSTRALIAN LAND AUTHORITY** by person(s) authorised by its Board in accordance with Section 45(2)(b) of the Western Australian Land Authority Act 1992.



Authorised Officer
NEIL WINFORD

Full Name of Authorised Officer

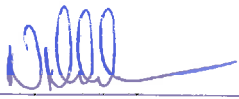


Authorised Officer
FIONA SARNAI

Full Name of Authorised Officer

Date: 8-3-18

EXECUTED by **WOODSIDE ENERGY LTD**
ACN 005 482 986 by its attorney, in the presence
of:



Signature of Witness

Nicole Nddle

Name of Witness (print)

Date: 8/3/18



Signature of Attorney

Michael Utzler

Name of Attorney (print)

N714722

Landgate Registration Number of POA

ANNEXURE A – RECOMMENDATIONS AND WORKS

RECOMMENDATIONS:	
1	WEL HAUL RD SPEED LIMIT REDUCTION: REDUCE THE SPEED LIMIT ALONG THE WEL HAUL RD TO 30KM/H THROUGH INFRASTRUCTURE CORRIDOR, INCLUDING THE AMMONIA PIPELINE CROSSING
WORKS:	
1	WEL HAUL RD – HORIZONTAL DELINIATION: INSTALL EDGE OF CARRIAGEWAY LINE ALONG THE ENTIRE LENGTH OF WEL HAUL ROAD
2	LNG WEIGHBRIDGE: DELINEATE THE LNG WEIGHBRIDGE WITH LIGHTING
3	WEL HAUL RD CARRIAGEWAY STANDARD: IMPLEMENT A TRAFFICABLE CARRIAGEWAY WIDTH OF 8.0 METRES
4	MOF RD/WEL HAUL RD INTERSECTION: SEEK THE SUPPORT OF THE CITY OF KARRATHA, PILBARA PORTS AUTHORITY AND ANY OTHER RELEVANT GOVERNMENT ENTITIES TO ENABLE THE INSTALLATION OF SIGNAGE AND LINE MARKING AS PER THE AECOM SKETCH
5	WEL HAUL RD GATEHOUSE: REMOVE THE GATEHOUSE AND ASSOCIATED TRANSPORTABLE STRUCTURE FROM LOT 566
6	WEL HAUL RD/SERVICE RD Y-INTERSECTION: IMPLEMENT LINE MARKING AS PER THE AECOM SKETCH
7	EAST WEST SERVICES CORRIDOR – INSTALL BARRIERS ALONG THE CORRIDOR IN ACCORDANCE WITH THE REQUIRMENTS OF CLAUSE 9

[illegible]